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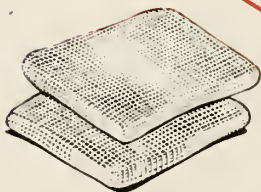
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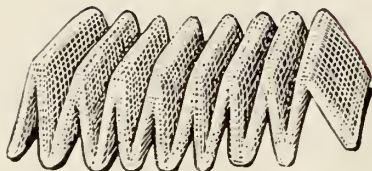
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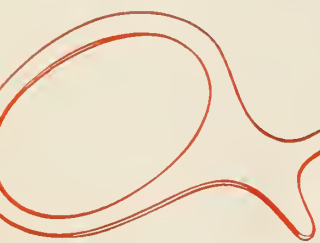
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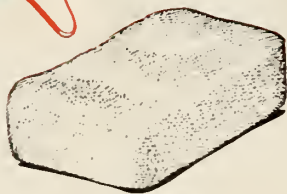
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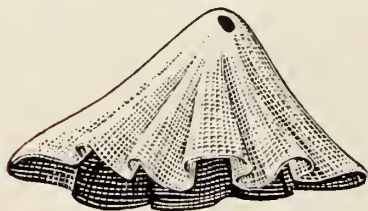
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THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

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No. 1

POLIOMYELITIS

FOLLOW-UP RESULTS OF A LOCALIZED EPIDEMIC (1941)

REPORT OF 123 CASES

H. EARLE CONWELL, M. D., F. A. C. S.

Birmingham, Alabama

The early history of poliomyelitis is veiled in considerable obscurity. This is in sharp contradistinction to our information on other diseases. Descriptions of many other entities have been made in ancient times. In contrast to these, our main knowledge of poliomyelitis began after the American Revolution.

Probable cases of poliomyelitis have been found in some of the ancient writings, but the first definite description is in the "Treatise on Diseases of Children" by Michael Underwood, London, published in 1784. Following this description, many similar cases appeared, but if the distribution of the paralysis differed from those described by Underwood, they were considered as separate paralytic entities. In 1835, John Badham reported 4 classical cases in two year old children, occurring in what would now be called a local summer epidemic in rural England. This is thought by many to be the first true description since they are more typical than those of Underwood.

The first epidemic in America was described by George Colmer of Louisiana in 1841. Another epidemic occurred in the Scandinavian countries in 1844 and was well described by Bergenholtz.

Read before the Association in annual session, Montgomery, April 20, 1949.

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The celebrated Duchenne, in 1885, localized the lesion to the anterior horn cells of the spinal cord. In 1887, Medin of Sweden, reporting 44 cases, recounted the epidemic characteristics of the disease and laid the foundation of our knowledge of its epidemiology. "The influence which the studies of Heine and Medin exerted on the thought of this subject during the latter part of the 19th Century led to their names being attached to the disease and for several decades anterior acute poliomyelitis was known as Heine-Medin's disease." In 1888, Rissler described the spinal cord changes in the acute stages of the disease, thus largely completing our knowledge of its pathology.

Despite Caverly's description of a non-paralytic form, a thesis later supported by Wickman, it was not until 1932 that this was established conclusively by Paul and Trask, who demonstrated the presence of the virus in non-paralytic cases.

In assaying the status of poliomyelitis at the present time, it must be stated that it is first a problem of public health, for in this province fall the phases of prevention and restriction of spread. Such epidemiologic measures as education of the public; quarantines, such as closure of swimming pools, theaters, and other places of public gathering; facilitation of hospital care for all those afflicted, and advance provision for necessary mechanical adjuncts, such as iron lungs, are all problems which can be met

only by the county and state health officers. They alone are in a position to suggest methods of prevention and reduction of spread, and to enforce them if necessary.

The treatment of the acute phases of the disease has been somewhat muddled, in recent years, by the efforts of various specialty groups to set aside this stage as peculiarly their own. There has been a conflict between pediatrician, internist, orthopedist, and, more recently, nurses and physiotherapists.

In seeking an answer to this dilemma one may well turn to the literature with its scientific contributions to our knowledge of poliomyelitis. The preponderance of contributions by orthopedists is overwhelming. Whatever the reason, the fact remains that definitive treatment for the sequellae of poliomyelitis, including the treatment of the acute phases of the disease, has been devised almost solely by orthopedic surgeons. The author, however, does not claim that specialists in other fields have not added to our knowledge.

But to continue, it is informative to review the treatment of poliomyelitis in the acute stages as outlined some years ago in Bradford and Lovett's *Treatise on Orthopedic Surgery*, dated 1905. They stated: "The object of treatment in this stage should therefore be, first, to support the affected limb in a normal position, and most carefully guard against the stretching of joints and ligaments and muscles; and secondly, by the use of electricity, massage, and systematic exercise to keep the nutrition of the affected muscles in the best possible condition."

"From the first the diseased limb should be placed and retained in a normal position so that the affected joints and muscles may be supported and kept at rest and relaxed. In this way the enfeebled muscles are placed under the best possible condition for their recovery. To allow attention to be diverted from these very important measures to pursue a medical treatment whose utility is doubtful is manifestly irrational.

"Dry warmth and rubbing are measures which seem of equal, if not of greater, value than electricity in the stage of simple paralysis.

"Any treatment which stimulates the circulation of the paralyzed limb aids in its

recovery by improving nutrition of the muscles and dry heat very effectually accomplishes this end." Later, in 1917, Lovett revised this recommendation and advised the use of hot moist packs in the treatment of the acute stages. It would perhaps be well at this point to say a few words regarding Sister Kenny's work. Dr. A. Bruce Gill, of Philadelphia, in an essay of the Kenny treatment, published in 1944, brought forth the astonishing similarity of the so-called "orthodox" method, as elaborated by Jones and Lovett in 1923, and those of Miss Kenny. "The two methods of treatment are compared point for point with devastating acuity, and the similarity is inescapable. There is one fundamental difference: the reasons Jones and Lovett give for their methods of treatment are based on anatomical and pathological facts as shown by research and experimentation, whereas Miss Kenny's concepts of the disease are largely *her own* interpretation of the causes underlying the symptoms and these have been refuted time and again by experiments designed specifically to test them. When one realizes that Miss Kenny's ideas of the physiology, pathology, and pathogenesis of the disease are erroneous, that she was anticipated by many years by Lovett with his recommendations for moist hot packs in the acute stages and muscle reeducation in the convalescent stages, and that her concepts of mental alienation, etc., have not been borne out by scientific tests and observation, it seems strange that she has been able to cause such an uproar both within and without the medical profession." As Gill says, "The propaganda for the Kenny concepts and methods of treatment has been harmful in that it has sought to cast discredit upon scientific medicine and the medical profession, in that it holds out false hope to the victims of infantile paralysis and their families, and in that the method of treatment is expensive and consuming of time and labor."

Investigations have resulted in certain classifications of poliomyelitis and the groups may be classified also as to permanence or severity of involvement, as follows:

1. The abortive case.
2. The spontaneous recovery.
3. The patients with paralysis and needing braces or surgery, or both.
4. The totally disabled.

According to figures published by the American Orthopedic Association, "the abortive type, which never has any paralysis, constitutes *at least 20 per cent* of all cases.

The second group may have paralysis during the acute stages, but the recovery is complete and spontaneous, whether medical care is given or not. This group constitutes 35 to 60 per cent of all cases of poliomyelitis. Or, totalling the two groups, from 55 to 80 per cent of all patients who contract poliomyelitis get well, whether or not any medical care whatsoever is given.

The conclusions are thus forced upon us that (1) poliomyelitis is a much more widespread disease than was once thought and (2) the majority of cases of poliomyelitis are handled quite satisfactorily by the general practitioner, without hospitalization and without the aid of specialists. It is true that most of the cases in the abortive group are treated as colds or related pathology, without the underlying disease being recognized. The moderately severe types (35 to 60 per cent of cases) are more often diagnosed but this group does not necessarily need hospitalization since the patients recover spontaneously.

It may therefore be said that hospitalization is by no means necessary in all cases of poliomyelitis. So it would seem to be much wiser in the suspected case to treat it expectantly, until some idea may be reached of the development and extent of the disease process. Such a method should yield better results than ill-advised journeys to the hospital, or persistent and meddlesome therapy the worth of which has not been proven. (This is in accordance with conclusions reached by McCarroll and Crego, in 1941; i. e., that treatment in the acute stages had little or no effect on the amount of paralysis or duration of treatment or end results.)

The remaining patients constitute 10-20 per cent of all cases and this group makes up most of those requiring specific orthopedic care. Such measures may be simply the wearing of proper braces, supplemented by physiotherapy and muscle reeducation, for only 10 per cent, or less, require surgical procedures to correct permanent paralysis.

Approximately 2 per cent of cases remain totally disabled and are not benefited by surgical measures.

Another feature in the disease is the great variation in severity of symptoms in different epidemics, and even within a particular epidemic. For instance, in the great New York epidemic in 1916 the mortality rate was 25.2 per cent. In the epidemic in Sydney, Australia in 1937, it was less than 1 per cent. The average mortality in recent epidemics in this country has been 7 to 8 per cent. These wide variations are due, not to differences in treatment, but to variations in the virulence of the virus in different epidemics. We are still unable to alter the course, or to aid, treat, or otherwise benefit the mean mortality for any particular epidemic. We are powerless, at this time, to control or reduce the virulence of the virus, to prevent or curb its extension in a given patient, or to do anything other than support and strengthen the patient by general measures until the fire of infection has burned itself out."

During the annual meeting of the State Medical Association in Montgomery in 1942, I presented a personal, closely followed observation of a poliomyelitis epidemic which occurred in certain areas in Walker county in 1941. At that time only 107 cases had been authoritatively collected. However, further data have been obtained, and further observations made, of an additional 16 cases which occurred in the same area, during the same time, and I am therefore presenting to you an 8 year follow-up of 123 cases of anterior poliomyelitis which occurred in the epidemic of said affliction in 1941 in Walker county, Alabama.

All of these cases were closely followed by the Walker county health authorities, supervised by Dr. Allen Waldrop, the local county health officer, and his able staff, as well as certain representatives of the National Foundation for Infantile Paralysis, who studied the epidemiology, the contagion, and other aspects pertaining to the bacteriology and pathology of the disease. A supervised orthopedic follow-up was made by myself with the aid of the personnel of the Crippled Children's Service of the State Department of Education. Personal orthopedic observations were made from the incipient stage of every one of the 123 cases and every case has been followed and examined by me at different times since the acute stage, the periods being weekly,

monthly, or twice a year depending on the case and necessary follow-up.

In my previous report it was stated that the treatment of these cases, as regards the orthopedic management, was as follows:

"As soon as the case was reported to the county health authorities by the patient's physician, field workers of the county health department, personnel of the orthopedic staff of the Crippled Children's Service and I commenced the case study immediately.

The parents were taught the care of the child, which included demonstrations of baths, proper hygienic care, direction of diet, instruction in isolation technique, and other important procedures. The patient was in certain instances either placed on a Bradford frame or proper firm bed, and appropriate splints applied to the extremities, if necessary, using, in most cases, the Toronto splint. These measures gave quite beneficial results. In the majority of cases, however, the patients did not demand splints, but a firm bed with fracture board between the mattress and springs was sufficient. Instructions by the physiotherapist of the Crippled Children's Service were given the parents in the method of applying hot packs and other forms of heat, dry or moist, in the early states. The parents were also given instructions regarding proper procedures relative to the position of the patient in bed and routine nursing care.

As soon as the muscular soreness and spasm disappeared the parents were given instructions regarding the use of very light stroking massage under the supervision of the physiotherapist. Here I wish to emphasize the fact that the orthopedic observation and properly supervised physiotherapy were supervised by myself."

"The above outline relative to the patient's treatment applies during the acute stage; i. e., whether it be paralytic, abortive, or the paralytic type, and lasts until onset of the subacute or chronic stage. If any patient had any residual during the convalescent stage, which was anywhere from 2 to 3 months following the initial infection, braces or other corrective appliances were utilized, and if any corrective surgery had to be done the patient was taken to one of the central hospitals, where treatment was carried out accordingly. It is interesting to note that hospitalization was only necessary

in 20 cases, or 16.3 per cent. In no instance did we classify the child as ready for having any surgical procedures until at least 3 years, or thereabout, following the initial infection."

In only an exceptional case did we find any lack of cooperation on the part of the parents or other members of the family, and we are making this plea: with properly supervised field observation in the early case of poliomyelitis, most of these cases will not have to be hospitalized, most of them do better with home treatment and proper supervision by the patient's private physician, the local county health authorities, and the orthopedic surgeon in charge. In this day, especially in the state of Alabama, which probably is no worse than any other state, hospital beds are at a premium. It is also a debatable problem as to how contagious anterior poliomyelitis is, and it seems that it behooves everyone in our profession to become conscious of the fact, if home treatment, in most instances, can be carried out, it is best. The emotional upset occasioned in the family with a child with poliomyelitis, by having it transported for miles, at great risk and shock to the patient, as well as the possibility of contagion to others, the shortage of beds, and the difficulty which the patient has to undergo in order to be transported, militate against hasty or drastic measures. Last, but not least, there is the question of the proper diagnosis having been made in the beginning. In a number of instances children are transported for miles, with a diagnosis of poliomyelitis with symptoms present only for 24 hours, and later on it turns out to be a case of measles, or meningitis, or other conditions not infrequently found in childhood. When these mistaken diagnoses occur, it places quite a responsibility on the hospital when the patient arrives, for it obligates other parties to determine the diagnosis and treatment, and, lastly, the child or the patient may become a hand ball between opposing factions. I therefore appeal to you for a more rational observation. Too much emotion has been manifested in the early care of poliomyelitis, resulting in hasty and unwarranted actions. I ask you to insist on longer home treatments in the early stage of the suspected cases, as well as the positive cases of anterior poliomyelitis.

As regards those who were economically responsible for the epidemic of poliomyelitis in Walker county in 1941, i. e., financial responsibility, I wish to say that this was cared for by the Crippled Children's Service of the State Department of Education, a certain amount from the National Foundation for Infantile Paralysis, the county health department—a unit of the State Health Department of Alabama—and small voluntary donations from citizens of Walker county.

The author feels that the results obtained in the 1941 poliomyelitis epidemic in Walker county present a picture such as one would expect to find in any other territory, and much better than most. In no other instance have I found an 8 year follow-up supervised in every department by an individual orthopedic surgeon. The economic cost was minimum, and the mortality rate was exceptionally low, there being only three deaths.

I feel that the epidemic was as severe as any average epidemic in the United States, for many cases were severely paralyzed, with as many different limbs and extremities involved as in any other epidemic in proportion to the number of cases. The end results, I feel, are exceptionally good and anyone of the individuals concerned in the observation of the epidemic will realize that the children were critically ill in many cases and that it was a severe type of virus which affected the patients. In very few instances was the affliction a transitory thing, as it has been in the case of other epidemics which have appeared in Alabama and other states. It involved many of the extremities to a rather severe degree, as noted in the table herewith presented:

Lower extremities with bilateral involvement	26
Lower extremities with unilateral involvement	37
Lower extremities with abdominal involvement	5
Lower extremities with trunk involvement	3
Lower extremities with back involvement	10
One lower extremity with back involvement	2
One lower extremity with trunk involvement	1
One lower extremity with abdominal involvement	1
Two lower extremities and one upper extremity	4
Two lower extremities and one upper extremity with abdominal involvement	1
Two upper extremities and one lower extremity	1
Both upper and lower extremities	4

Both upper and lower extremities with back involvement	2
Both upper and lower extremities with abdominal involvement	1
Both upper and lower extremities with trunk involvement	1
One upper extremity and one lower extremity	4
One upper and one lower extremity with back involvement	2
One upper and one lower extremity with abdominal involvement	3
Both upper extremities with abdominal involvement (deceased)	1
Upper extremities, bilateral (deceased)	1
One upper extremity with back involvement	1
Upper extremities, unilateral	6
Cases with back involvement only	2
Back involvement with abdominal involvement	2
Neck and back involvement	1
Bulbar type (deceased)	1

Total cases 123

There were three deaths, one of which was the bulbar type, making a percentage of 2.4 plus per cent mortality. No residual paralysis followed the acute stage in 54 cases, or 43.9 per cent. There was residual paralysis following the acute stage in the lower extremities in 49 cases; residual paralysis of the upper extremities in 5 cases; residual paralysis of the trunk in 3 cases; residual paralysis of the abdomen in 3 cases; and residual of the back in 6 cases. This makes a total of 66 cases with residual paralysis, or a percentage of 53.6 plus following the acute stage.

After an 8 year follow-up it has been definitely shown that only 20, or 16 plus per cent, of these cases had a paralysis which was of any permanency, and of these 15 were in the lower extremity. Of the 20 cases, 15 needed corrective surgery, which brought about marked improvement.

SUMMARY

1. Early diagnosis of acute poliomyelitis is important.
2. Proper supervision from health authorities is imperative.
3. Medical care of the patient is of paramount importance.
4. Orthopedic care, with supervision of physiotherapy, is necessary regardless of how mild the case may be because weakened backs and extremities, if not supervised, may result in permanent injury.
5. Most cases can be treated at home under proper supervision.

6. The author feels that by proper home care and supervision by the pediatrician and the orthopedic surgeon, at certain periods, excellent function can be obtained where otherwise selected cases would have permanent disabilities.

7. Corrective surgery is necessary in a certain percentage of cases but it should not be done, in most instances, earlier than 3 years following the acute attack.

8. Hospitalization is important at the proper time but in the present day of bed shortage such economic obligation should be made only where necessary.

9. There are hundreds of cases of poliomyelitis which go undiagnosed, most of them untreated, and they get well, but if diagnosed early and properly treated at home better results will ensue.

We should be conscious of this large number of cases from the standpoint of public health, and medical, pediatric, and orthopedic supervision and orthopedic care, and not get too excited and center our attentions only on the hospital cases, for there are other children afflicted with poliomyelitis at our own front door needing good treatment.

It is regrettable that at this time we cannot offer more specific treatment. Until such time as we can, "it should always be remembered that cases of poliomyelitis are not cured, that they recover, and we can but assist in that recovery."

Conwell Orthopedic Clinic,
811 South 20th Street.

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TREATMENT OF MALIGNANT MELANOMA

J. O. MORGAN, M. D.

Gadsden, Alabama

It is attested by all students of oncology that malignant melanomas are among the most dangerous and malignant tumors with which we deal. On account of the morphologic features of these tumors some have been designated melanocarcinoma and others melanosarcoma. When we consider their habits and the histogenesis of the cells from which they arise, the term malignant melanoma appears to be the designation of choice.

RELATION OF MOLES TO MALIGNANT MELANOMA

Non-malignant nevi, or pigmented moles, are frequently the precursors of malignant melanoma. Masson¹ has shown that pigmented moles arise from the melanoblasts of the sensory end organs. Some are thought to spring from Meissnerian corpuscles in the corium, while others, probably the majority, arise in close relationship with the corpuscles of Merkel and Ranvier in the epidermis.

We are all aware of the fact that most individuals have from a few to many pigmented moles scattered on various parts of the body, but it is only occasionally that one becomes malignant. Trauma plays a great role in this transformation. It is not a single injury, but repeated trauma to a mole that is thought to result in malignant

changes. Non-malignant moles are rare about the belt line, the genitalia, the legs and feet, but, on the contrary, malignant melanomas are found frequently in these locations. This is evidently accounted for by trauma. From 30 to 50 per cent of patients with malignant melanomas give a history of trauma to a mole.²

Usually when malignant changes take place in a mole it is observed to either increase in size, become more pigmented, show evidence of ulceration or bleed easily. Occasionally these changes are not seen to occur and the first evidence of malignancy may be found when an enlarged lymph node is removed and reveals metastatic melanoma. In these cases the primary lesion may be microscopic in size or an innocent looking mole may be found to have undergone malignant changes.

ENDOCRINE INFLUENCE ON ACTIVATION

The pituitary, adrenals and especially the gonads are known to influence melanoblastic activity to a considerable extent. Small children may have an occasional pigmented nevus which may show no special changes until puberty, at which time they often become darker and increase in size. Frequently nevi which were not visible before puberty make their appearance at this time. Children at times have pigmented

Read before the Association in annual session, Montgomery, April 19, 1949.

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2. Pack, G. T., and Livingston, E. M.: Treatment of Cancer and Allied Diseases, Paul B. Hoeber, Inc., New York, 1940, pp. 2071-2094.

tumors which have all the gross and histologic characteristics of malignant melanoma but show no tendency to metastasize. Pack³ states that, in his observation of more than nine hundred malignant melanomas, he has never seen metastasis of one of these tumors before puberty, although in several cases a pathologic diagnosis of malignant melanoma has been made. Webster and associates⁴ report two cases in children under the age of puberty with metastasis to regional lymph nodes. Both of these were living and well without evidence of recurrence ten years after operation.

In one large series not a single malignant melanoma was found in a castrated person,³ and I have not found a reported case in my review of the literature.

Pigmented moles occasionally undergo malignant changes during pregnancy. When this occurs a fatal outcome is very likely. However, Deland⁵ reports a case that went through two pregnancies during the course of treatment of recurrent malignant melanoma and showed no evidence of the disease four years later.

INCIDENCE AND DISTRIBUTION

Malignant melanoma is not a very common tumor but deserves our most serious consideration on account of its extreme malignancy. Approximately 2 per cent of malignant neoplasms of the entire body and 20 per cent of those of the skin are of this type.² MacDonald⁶ found malignant melanomas to account for only .93 per cent of the total cancers in Connecticut during a period of twelve years.

These tumors have been found on all parts of the body surface, the mouth, rectum, eye, brain and meninges. They frequently appear about certain body orifices—mouth, anus and vagina. Subungual melanomas are frequently reported. The most common sites of malignant melanoma are the head

and neck and lower extremities. The foot is very frequently involved.^{3, 4}

PATHOLOGY

These tumors vary greatly in size and color. Most commonly, however, they are deeply pigmented. Occasionally one is devoid of pigment. This is spoken of as amelanotic melanoma. These are usually more malignant than the pigmented variety. The morphology is identical with the pigmented lesion and the dihydroxyphenylalanine, or dopa, reaction is positive when applied to its cells. The cells of malignant melanoma arrange themselves in cords or sheets. They are frequently cuboidal. Spindle cell types also occur and giant cell formations are frequently seen. The nuclei are hyperchromatic and mitoses are numerous.

Metastasis occurs early. Very soon malignant cells may grow into the small lymph channels of the skin and a little later into the lymph trunks in the fascia over the underlying muscles. In a comparatively short time metastasis to the regional lymph nodes frequently occurs. Occasionally these tumors grow into the blood vessels and then metastasis to any tissue or organ of the body may occur. Metastasis from other types of cancer is somewhat selective as to organ or tissue, but this is not true of malignant melanomas.

TREATMENT

The treatment of malignant melanoma is very discouraging on account of its extreme degree of malignancy. Until recently, five year cures were rare. In 1943 Zeisler⁷ reported seven cases, all of which resulted disastrously. It was his feeling that patients with this disease would live longer if left alone. At the present time most surgeons do not have such a pessimistic attitude. Pack and Livingston² state that they had a 30 per cent five year survival rate in 105 cases of primary malignant melanoma, and an overall five year survival rate of 14 per cent in a series of 242 cases.

PROPHYLACTIC TREATMENT

It is obviously impossible to remove all pigmented non-malignant nevi, since we can find one or more on almost every in-

3. Pack, G. T.: Special Publication, N. Y. Acad. of Sciences 4: 52 (Jan.) 1948.

4. Webster, J. P.; Stevenson, T. W., and Stout, A. P.: The Surgical Treatment of Malignant Melanoma of the Skin, Surg. Clinics of N. A., W. B. Saunders Co., (April) 1944, pp. 319-339.

5. Deland, E. M.: Radical Treatment of Malignant Melanomas of the Lower Extremities, Surg. Clinics of N. A., W. B. Saunders Co., (Oct.) 1947, pp. 1136-1143.

6. MacDonald, E. J.: Special Publication N. Y. Acad. of Sciences 4: 71 (Jan.) 1948.

7. Zeisler, E. P.: Cancer of the Skin, Surg., Gynec. & Obst. 56: 472 (Feb. 15) 1933.

dividual. It seems that the nearest we can approach the ideal situation is to remove, adequately, all nevi or other pigmented lesions which are frequently traumatized, show increased pigmentation, change in size or develop any other suspicious manifestation. Such lesions should be widely excised. If histologic studies show no malignant changes, this treatment is adequate; on the other hand, any microscopic signs of malignancy calls for more radical treatment.

ELECTROCOAGULATION

It is generally considered that electrocoagulation is a dangerous and inadequate treatment of malignant melanoma. When this method is used, material for microscopic study is not available, it is difficult to know whether the entire primary lesion is removed, and extension into surrounding lymph vessels is not destroyed.

Amadson⁸ reports 27 cases treated by this method with 100 per cent recurrence. He believes that unstable malignant cells are pushed along lymph channels by tissue gas created during the coagulation.

Case 1. White male, age 60 years, admitted September 30, 1942 on account of mass in left axilla. This was widely excised. Pathologic diagnosis: Metastatic malignant melanoma to axillary lymph nodes. Further history showed that 3 months previously a mole at the belt line on the left abdomen had been treated by electrocoagulation. He was given deep therapy x-ray. Death occurred one year later as a result of generalized metastasis of the melanoma.

Comments: Evidently the treatment in this case was inadequate, and probably the outcome would have been different with other methods of treatment.

IRRADIATION THERAPY

It is generally believed that the vast majority of these tumors are radio-resistant and that it is only the occasional case which is cured or even benefited by x-ray or radium therapy. In one large series treated by irradiation therapy it was reported that the tumors completely disappeared in 5 cases and 41 diminished in size.² The authors stated that the amount of radiation therapy used in these 5 apparently cured cases was sufficient to cause necrosis of the skin, and in their opinion actual cautery would have

caused less morbidity and given better cosmetic results. In a series of 105 cases reported from the Mayo Clinic⁹ one case was finally cured by irradiation after two failures with radical surgery. In this case there was no evidence of recurrence 20 years after intensive roentgen and radium therapy.

Irradiation should not be eliminated from our armamentarium in this disease, because occasionally a case is benefited or even cured by this type of therapy. In my opinion it should certainly be used in those cases in which there are recurrences following one or more attempts with radical surgery, and also in those in which radical surgery is contraindicated.

SURGICAL TREATMENT

The ideal method of treating malignant melanoma is wide excision of the primary lesion, removal of all lymph vessels draining the tumor, and complete dissection of the regional lymph nodes, in mass, similar to the method used in radical breast amputation. This method can be readily accomplished when the primary lesion is situated close, or comparatively close, to the regional lymph nodes; e.g., if the lesion is in the lower abdomen or upper thigh. Obviously, if the lesion is a considerable distance from the regional lymph nodes, as on the foot, this method would hardly be feasible. Under the latter circumstances, wide excision of the primary lesion together with the underlying fat and fascia, and at the same time, or a few weeks later, a complete removal of the regional lymph nodes is usually considered the procedure of choice. High amputation has also been advocated in cases with regional lymph node involvement.

Excision of Primary Lesion: The primary lesion should always be very widely excised, and the fascia over the underlying muscles should be removed even more widely than the skin. This is important because malignant cells at an early stage grow into the lymph channels of the skin and the lymph trunks of the fascia. If wide excision is not

9. Bickel, W. H.; Meyerding, H. W., and Broders, A. C.: Melanoepitheloma (Melanosarcoma, Melanocarcinoma, Malignant Melanoma) of the Extremities, Surg., Gynec. & Obst. 76: 570 (May) 1943.

8. Amadson, P. D.: Electrocoagulation of Melanoma and its Dangers, Surg., Gynec. & Obst. 56: 943 (May) 1933.

carried out, local recurrence is frequent. No attempt should be made to remove a sufficiently small amount of skin so that the edges can be drawn together and sutured. In practically all cases the skin defect should be so large that skin grafting is necessary. (Fig. 1.)

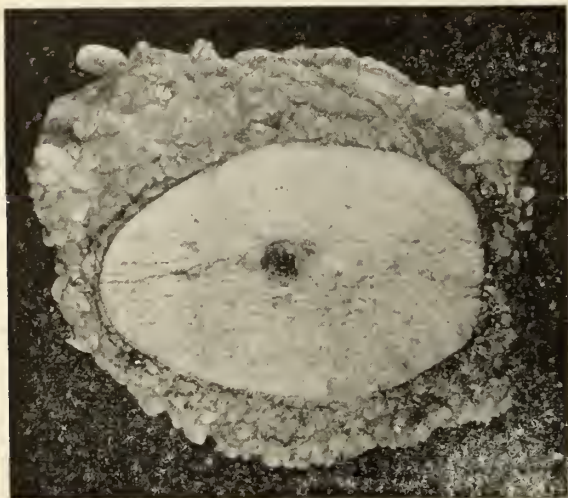


Fig. 1. Malignant melanoma widely excised. Note fat and fascia are excised more widely than skin.

Amputation: For several years high amputation has occasionally been carried out in the more severe cases. Recently Pack³ has been performing amputation of the entire extremity with dissection of the regional lymph nodes in malignant melanoma of the hands or feet if there is evidence of metastasis. He feels that it is not safe to leave any of the intervening lymphatics between the primary lesion and the regional nodes.

Bickel, Meyerding and Broders⁹ believe that extensive excision with removal of regional lymph nodes offers the patient as favorable an outcome as does amputation. When a digit is involved, wide excision is not feasible and amputation with regional node dissection is advocated.

Lymph Node Dissection: It is generally agreed that, on account of the very frequent early metastasis of malignant melanoma to the regional lymph nodes, these nodes should be removed in all cases except those in which it is not possible to know the group of nodes which might be effected by metastasis. If the primary lesion is located in the mid line of the back, chest or abdomen, the lesion may be widely excised and the

patient frequently examined for evidence of metastasis.

There is some question as to the proper time for removal of regional lymph nodes in those cases in which it is not feasible to remove the primary lesion, the lymph channels and the nodes in mass. Some¹ believe the nodes should be removed at the time of excision of the primary lesion, or as soon thereafter as the condition of the patient will permit. Pack and Livingston² advise deferring the lymph node dissection for one or two weeks if there is gross evidence of metastatic involvement, and six weeks if the nodes show no signs of metastasis. This is based on the belief that melanoma cells may be in transit in the lymph channels and may be filtered out by the lymph nodes during the interval between operations. If the nodes are removed at the time of the primary operation, any malignant cells which may have passed into the lymph vessels will grow in the blocked vessels or be emptied into the fresh wound.

It is important that the lymph nodes be removed radically. In the groin the superficial and deep inguinal nodes and those in Scarpa's triangle should be removed, together with the superficial fascia covering the underlying muscles. The nodes in the femoral canal must be removed. It may be necessary to divide the inguinal ligament to facilitate their removal. The iliac fossa should be entered just above the inguinal ligament and the deep iliac and obturator nodes completely removed. Radical dissection of the axillary nodes should be carried out as completely as for carcinoma of the breast and in cases where the cervical nodes are, or may be, involved, a radical block dissection of the neck is necessary.

Case 2. M. R., a white woman, age 36 years, was admitted to the hospital Dec. 20, 1947 on account of a pigmented lesion on the right leg. She had been advised by a roentgenologist to have it excised because it had not responded to x-ray therapy.

Examination revealed a slightly raised, pigmented lesion, 2 cm. in diameter, on the lateral surface of the right leg midway between the knee and ankle. No enlarged lymph nodes could be palpated in the groin.

The lesion was widely excised including the fat and fascia covering the underlying muscles. The defect was covered immediately by a skin graft.

Pathologic examination revealed malignant melanoma without evidence of extension into surrounding tissues.

She was readmitted on Feb. 7, 1948. The area from which the lesion was removed was completely healed. A radical dissection of the lymph nodes of the right groin was carried out. This dissection included the fat, fascia and superficial nodes in the inguinal region and Scarpa's triangle, the nodes in the femoral canal, the obturator nodes and the lymph nodes in the iliac fossa.

Pathological examination of the nodes did not show any evidence of metastasis.

This patient has been kept under observation and at last examination, on March 15, 1949, there were no signs of recurrence or metastasis.

Case 3. A white female, age 22 years, was admitted to the hospital on Dec. 3, 1947 because of a tumor on the right calf. She had been aware of a mole on the back of the leg for several years. For a period of a few weeks before admission it had been irritated and bled a few times.

On examination a raised, darkly pigmented tumor which measured 1 by 1½ cm. was found on the back of the right leg. Examination of the popliteal space and the groin did not reveal any enlarged lymph nodes.

The lesion was widely excised and the defect grafted as in Case 2. The pathologic diagnosis was malignant melanoma. (Figs. 2, 3, and 4.)

This patient was readmitted on Jan. 11, 1948 and the superficial and deep lymph nodes of the groin were radically removed. The pathologic study of these nodes showed metastatic melanoma in one of the iliac nodes. (Fig. 5.)

She was last examined March 10, 1949 at which time there was no evidence of recurrence and she appeared to be in good health.

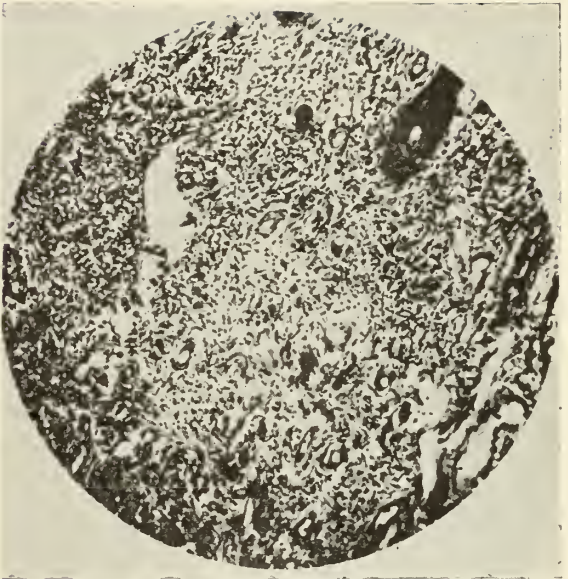


Fig. 3. (Case 3) Primary lesion near skin surface. Dark masses are heavily pigmented cells. X 100. Hematoxylin and eosin.

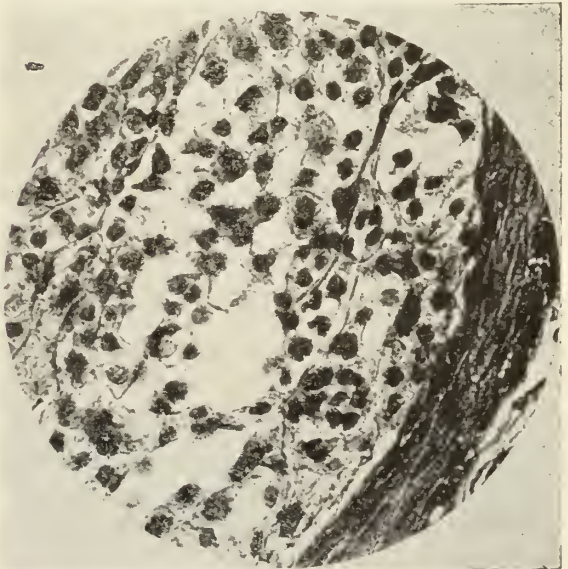


Fig. 4. (Case 3) Primary malignant melanoma. Pigment in cytoplasm can be seen. X 432. Hematoxylin and eosin.

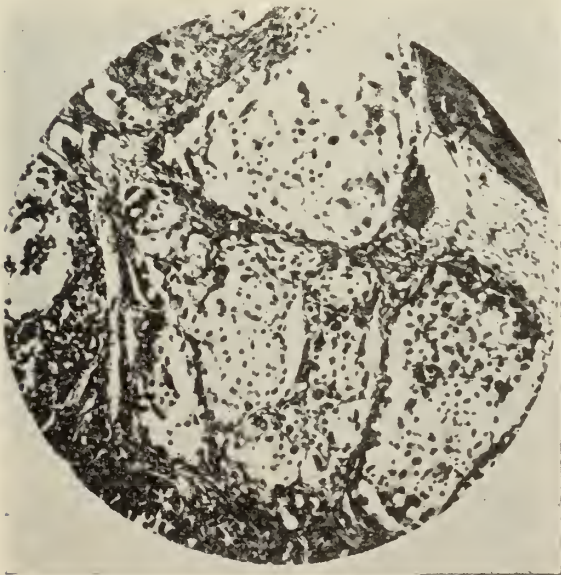


Fig. 2. (Case 3) Primary malignant melanoma. Note nests of malignant cells. X 100. Hematoxylin and eosin.

Comment. Cases 2 and 3 are almost identical, except Case 3 had lymph node metastasis and did not have preoperative x-ray therapy. I believe that Case 3 shows clearly the advisability of prophylactic regional lymph node removal in malignant melanoma. This case showed no more reason for this procedure than did Case 2. It will be noted that in both of these cases an in-

terval of approximately six weeks was allowed to elapse between excision of the skin lesions and the lymph node dissection as recommended by Pack and Livingston.

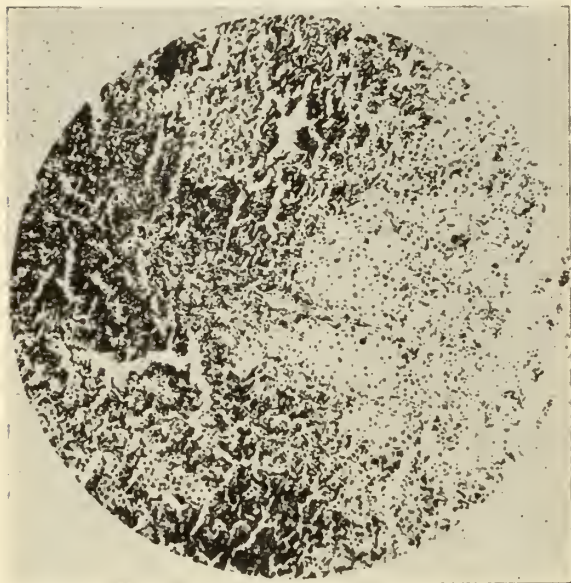


Fig. 5. (Case 3) Metastatic malignant melanoma to iliac lymph node. Nests of malignant cells in right half of field. X 100.

SUMMARY

1. In most cases pigmented moles are the precursors of malignant melanoma. It has been shown that the melanoblasts of the

sensory end organs are the cells from which these lesions arise.

2. Trauma is an important factor in the transformation of pigmented moles into malignant melanoma. When this change takes place the lesion is frequently observed to increase in size, become more pigmented, show signs of ulceration or bleed easily.

3. Melanoblastic activity is greatly influenced by the pituitary, adrenals and the gonads. Lesions which have all the morphologic characteristics of malignant melanoma, occurring in children under age of puberty, rarely, if ever, result in death.

4. After puberty metastasis occurs early. This usually takes place through the lymph channels to the regional lymph nodes. Occasionally metastasis is by way of the blood stream.

5. All pigmented moles that begin to increase in size, become more pigmented or show other changes should be widely excised. Electrocoagulation is condemned in all cases. Malignant melanomas are highly radio-resistant and in the majority of cases irradiation is of little or no benefit. Wide excision of the primary lesion with radical dissection of the regional lymph nodes is the treatment of choice.

6. Three cases of malignant melanoma are reported.

TIME TO STAND UP AND BE COUNTED!

GEORGE F. LULL, M. D.
Secretary and General Manager
American Medical Association
Chicago

There have been a few instances recently in which medical organizations, particularly scientific groups, have indicated reluctance to go on record against Compulsory Health Insurance on the ground of propriety.

The question raised is whether a scientific group should "get mixed up in politics." The answer to that question is that we are "mixed up in politics" whether we like it or not, because medicine has been brought under political attack.

The only question which remains is whether we are going to defend our profession against that political attack—and how we can do it most effectively.

If Compulsory Health Insurance is enacted, every medical organization will be

subject to political controls and influence—and every doctor will be restricted in the practice of his profession. Then we really will be "mixed up in politics."

That issue, we believe, makes it imperative that all medical organizations—scientific or otherwise—take their stand, publicly and vigorously, against the emasculation of sound medical practice.

American medicine needs to present a united front against politically-controlled medical practice—and we believe it is not only ethical but highly desirable for our scientific groups to make their position known.

Let's stand up and be counted!

A FREQUENTLY OVERLOOKED CAUSE OF BLINDNESS IN INFANTS: CONGENITAL GLAUCOMA

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Glaucoma in the newborn and the infant sometimes is overlooked in its early stages when it is still possible to reestablish the normal physiology of the intra-ocular fluid. Since earliest medical writings to the present decade, the prognosis of congenital glaucoma has been uniformly bad. Even so late as 1945, Duke-Elder wrote in his textbook that the treatment was difficult and problematical. Repeated trephines, iridencleises, and other glaucoma operations greatly disfigured the eye but failed to control the glaucoma permanently. However, the technic of goniotomy, devised by Otto Barkan, has changed entirely the prognosis and offers the possibility of normal vision for life—provided the diagnosis is made in time.

SIGNS AND SYMPTOMS

The earliest typical sign is an increased size of the eye, which appears large in proportion to the baby's head (Fig. 1). Usually, the parents have been complimented on the baby's "beautiful, big eyes." But the baby sleeps fretfully, cries, and, because of the

extreme sensitivity to light, hides his face. There is excessive lacrimation and the baby rubs his eyes with his fingers. As the glaucoma advances and the tension becomes more elevated, the cornea is stretched so that it loses its transparency and becomes cloudy. The presence of increased intra-ocular tension is now apparent, though some cases have been confused with interstitial keratitis. The differentiating sign is that the glaucomatous eye is larger than normal; in interstitial keratitis the size of the eye is normal. If the disease continues, the corneal clouding may become a permanent opacity. Vision is greatly reduced from this and in an even greater degree to the concomitant damage to the optic nerve. Because of the plastic nature of the coats of the eye, the eye is gradually distended until it reaches the stage of buphthalmus or "ox eye." Recognition is now easy, but by this time useful vision has been entirely lost, and the canal of Schlemm so obliterated that normal drainage cannot be reestablished, regardless of the surgical procedures attempted. The pain and discomfort may lessen, though the tension usually remains elevated. The eye may be retained for years, though in cases in which the buphthalmus is unilateral it is



Fig. 1. (Case No. 1) In congenital glaucoma, the eye is large in proportion to the infant's head. The corneal diameter is 15 mm., and its haziness is shown by the central shadow in the left eye. The tension is right 58 mm., left 55 mm. (Schiotz).

Presented in October 1948 before the Gulf Coast Medical Association, Gulfport, Miss.



Fig. 2. (Case No. 1) The same case, a year later, after five goniotomies on each eye; shows clarity of iris markings. The tension at this time was right, 23 mm., left 22 mm. (Schiotz).

often removed for the cosmetic improvement.

The earlier the diagnosis is made and surgery performed, the better is the prognosis. In addition to the clinical appearance, the diagnosis is verified and its degree of severity known by measuring the tension of the eye. To be accurate, this must be done under general anesthesia. Barkan has found that complete relaxation can be secured only under ether, and has found that false high readings sometimes have been obtained under vinethene ether. Visual fields, so important in testing glaucoma of middle and old age, cannot be accurately recorded in children.

Medical treatment with miotics, such as pilocarpine and eserine, has no value in congenital glaucoma. In glaucoma of adults, the iris itself may block the chamber angle; constriction of the iris from miotics may pull away the iris from the chamber angle. In contrast, congenital glaucoma is caused by a persistence of the fetal condition wherein both the scleral and uveal portions of the trabeculae persist, and thus strands of trabecular tissue stretch across the angle.

SURGICAL PROCEDURES

The only surgical procedure found to be successful for any extended length of time is the incision of the iridic angle, or goniotomy of Barkan. The technic is as follows: Under complete relaxation provided by ether anesthesia, the tension is recorded with the tonometer. The contact lens is applied to the eye, and buffer solution is introduced

beneath the lens. This allows a direct view of the chamber angle beneath the scleral spur. The eyepiece of a slit lamp microscope is used to see the persistent fetal tissue and

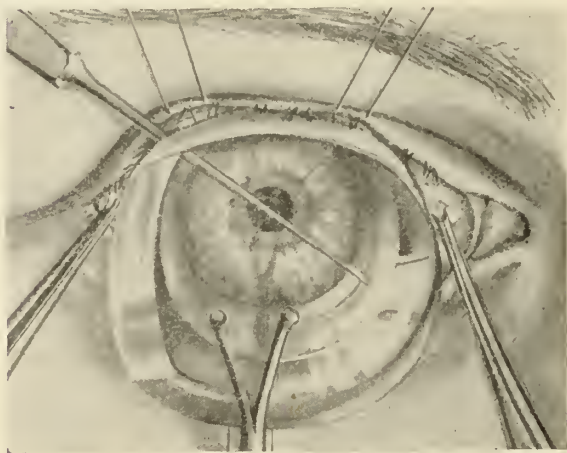


Fig. 4. Artist's drawing shows the upper lid retracted by two sutures, the lower lid by one. Forceps grasp the conjunctiva at each fornix, steadying the eye. The contact lens is placed on the eye, the buffer solution instilled. The goniotomy knife is inserted through the cornea at one limbus to cut away the fetal tissue at the opposite side.

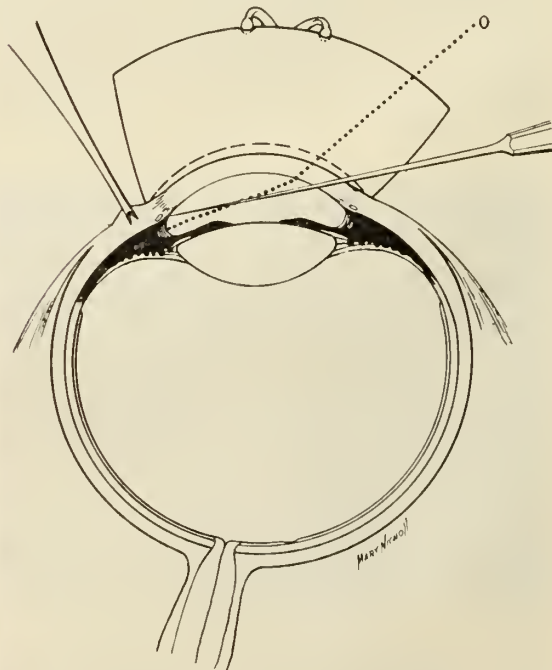


Fig. 5. Diagram of goniotomy operation. The observer's line of vision is shown at O. The contact lens is held in place by a bipronged rod. The goniotomy knife penetrates the cornea, and cuts or strips away the fetal meshwork of tissue which blocks the canal of Schlemm.



Fig. 3. For adequate magnification, surgery is performed through the eye piece of a slit-lamp microscope.

the landmarks of the chamber angle (Fig. 3). The goniotomy knife is inserted through the corneal limbus, across the chamber in front of the pupil to reach the opposite angle (Fig. 4). With the microscope, the surgeon views the angle through the contact lens as he cuts away the fetal tissue (Fig. 5), and separates the peripheral adherent iris from the cornea. A quarter or more of the adherent iris is stripped at one operation, and this may be repeated. During this procedure the aqueous is not lost because the penetrating incision is plugged by the shaft of the knife, which is constructed so that its diameter increases slightly from point to handle. When the fetal tissue has been cut, the knife is removed quickly to allow the escape of as little aqueous as possible. In many cases, the reduction of the intra-ocular pressure will allow a little bleeding from the central portion of the iris.

POSTOPERATIVE COURSE

In comparison with surgery for congenital glaucoma done previously, goniotomies have been spectacularly successful. Though several such procedures may be required for some eyes, many have been treated successfully with only one goniotomy. It is necessary to record the intra-ocular pressure under complete anesthesia at intervals for a year or two to be certain that it is controlled. Whenever this is done, the goniotomy instruments should be at hand for use if the intra-ocular pressure is increased.

A complication which must be constantly guarded against is trauma to the lens, which

would be followed by a traumatic cataract. In two of this series, such cataracts were formed. In one case, the infant was not completely anesthetized and unexpectedly moved his head while the goniotomy knife was at the chamber angle, causing an incision of the lens capsule. The traumatic cataract will be removed at a later date, and at the present time the intra-ocular pressure is normal. The second cataract occurred without known trauma to the lens at the time of surgery.

DISCUSSION OF CASES DETAILED IN TABLE I

In Group 1, aged one month to three years, the glaucoma has been controlled so far in



Fig. 7. (Case No. 9). Postoperatively, the iris markings are clearer. The pressure is not yet controlled.



Fig. 6. (Case No. 9). Hazy cornea of congenital glaucoma, preoperatively.



Fig. 8. (Case No. 10). Infant three weeks old. Advanced cloudiness of cornea in congenital glaucoma. The tension was 40 mm Hg., O. U. Because of death following transfusion, one eye was obtained for examination.

seven of ten cases. Cases 8 and 9 (Figs. 6 and 7) require further surgery, and Case 10 (Fig. 8) died immediately following a trans-fusion, performed eight hours postoperative-ly. One of these eyes was obtained for examination. The site of the scleral incision can be seen (Fig. 9). There was no evidence of Schlemm's canal or the spaces of Fontana

in this eye, which probably accounts for the extreme cloudiness of the cornea.

In the majority of this group, the tension has been normal for a length of time which encourages the belief that it will remain so. The time elapsed for follow up studies varies from six months to a year, and it seems likely that if the intra-ocular pressure is con-

NAME AND PRESENT AGE	PREGNANCY (FULL-TERM)	NO. OF CHILD	AGE WHEN CORNEAL CLOUDINESS FIRST OBSERVED BY PARENTS	AGE WHEN FIRST SEEN BY OPHTHALMOLOGIST	INVOLVEMENT (BILATERAL, ETC.)	PREOPERATIVE TENSION	DATE FIRST GONIOTOMY	OPERATIVE COMPLICATIONS	POSTOPERATIVE COMPLICATIONS	SUBSEQUENT COURSE AND SURGERY	TENSION LAST RECORDED
1. C. B. 19 MONTHS	FULL-TERM, NORMAL DELIVERY	FIRST	3 MONTHS	4 MONTHS	R & L	R = 58 MM. L = 55 MM.	JUNE 12, 1947 R & L	TWO SMALL TRIDOTOMIES WERE MADE	NONE. REPEATED GONIOTOMIES WERE REQUIRED TO CONTROL THE GLAUCOMA.	GONIOTOMY R & L: 6-17-47; 7-3-47; 7-25-47; 8-22-47 GONIOTOMY R: 9-29-47	DEC. 1948 R = 23 MM. L = 22 MM.
2. E. E. 24 MONTHS	FULL-TERM	THIRD	5 DAYS	1 YEAR, 3 MONTHS	R & L	R = 75 MM. L = 75 MM.	DEC. 8, 1947 R & L	TRAUMATIC CATARACT CAUSED BY KNIFE CUTTING ANTERIOR CAPSULE OF LENS, WHEN PATIENT WAS INADEQUATELY ANESTHETIZED.		GONIOTOMY R: 12-19-47 GONIOTOMY L: 3-19-48	OCT. 4, 1948 R = 15 MM. L = 15 MM.
3. W. H. E. 14 MONTHS	FULL-TERM, NORMAL DELIVERY	FIRST	6 MONTHS	6 MONTHS	R & L	R = 36 MM. L = 38 MM.	APRIL 26, 1948 R & L	MINIMAL HEMORRHAGE AT ANGLE OF EACH EYE. LOSS LEFT ANTERIOR CHAMBER	POSTOPERATIVE HEMORRHAGE - LEFT EYE. TRAUMATIC CATARACT LEFT EYE FIRST NOTED 1-2-49	PARACENTESIS R: 4-20-48 PARACENTESIS L: 5-1-48; 5-4-48 GONIOTOMY R: 5-31-48; 6-29-48 R	JAN. 17, 1949 R = 25 MM. L = 17 MM.
4. F. T. 12 MONTHS	FULL-TERM, NORMAL DELIVERY	THIRD	4 MONTHS	5 MONTHS	R & L	R = 50 MM. L = 38 MM.	FEB. 27, 1948 R & L	MINIMAL HEMORRHAGE AT IRIS, LEFT EYE		GONIOTOMY R: 4-20-48; 6-18-48 GONIOTOMY L: 5-1-48; GONIOTOMY R & L: 5-14-48	JAN. 7, 1949 R = 44 MM. L = 15 MM.
5. D. S. M. 14 MONTHS	FULL-TERM	SECOND	BIRTH	8 MONTHS	R & L	R = 40 MM. L = 40 MM.	FEB. 24, 1948 R & L			GONIOTOMY L: 7-30-48 GONIOTOMY R: 8-2-48	JAN. 14, 1949 R = 25 MM. L = 25 MM.
6. W. B. G. 8 MONTHS	FULL-TERM	SECOND	3 MONTHS	4 MONTHS	R & L	R = 40 MM. L = 40 MM.	AUG. 18, 1948 LEFT	MINIMAL HEMORRHAGE IN ANGLE		GONIOTOMY R: 7-26-48	JAN. 17, 1949 R = 12 MM. L = 12 MM.
7. O. R. 3 YEARS	FULL-TERM, NORMAL DELIVERY	FIRST	12 MONTHS	24 MONTHS	L	R = 23 MM. L = 30 MM.	APRIL 23, 1948 L	MINIMAL HEMORRHAGE LOSS OF ANTERIOR CHAMBER			JAN. 28, 1949 R = 44 MM. L = 44 MM.
8. G. W. 3 YEARS	FULL-TERM, NORMAL DELIVERY	EIGHTH	SEVERAL DAYS AFTER BIRTH	4 1/2 YEARS	R & L	R = 38 MM. L = 33 MM.	NOV. 23, 1948 R & L			GONIOTOMY R & L: 12-27-48 GONIOTOMY R: 1-3-49; 2-7-49; 2-21-49 GONIOTOMY L: 2-14-49	FEB. 24, 1949 R = 43 MM. L = 39 MM.
9. W. P. 6 MONTHS	FULL-TERM, NORMAL DELIVERY	FIRST	8 WEEKS	9 WEEKS	R & L	R = 34 MM. L = 44 MM.	OCT. 18, 1948 R & L			GONIOTOMY R & L: 1-21-49	
10. L. B. 1 MONTH	FULL-TERM	THIRD	INFANCY	5 WEEKS	R & L	R = 40 MM. L = 40 MM.	FEB. 6, 1948 R & L	A CRUISE FLAP SCLEROTOMY WAS DONE AT THE UPPER LIMBUS OF EACH EYE; CORNEA TOO OPAQUE FOR GONIOTOMY.	DIED		
11. J. J. 2 1/2 YEARS	FULL-TERM	FIFTH	INFANCY	3 1/2 YEARS	DUPHTHALMUS R	R = 40 MM. L = 22 MM.	OCT. 3, 1947 R	MINIMAL HEMORRHAGE		ENUCLEATION RIGHT EYE: 12-12-47	JAN. 10, 1949 L = 24 MM.
12. M. J. 8 1/2 YEARS	FULL-TERM	FOURTH	INFANCY	4 1/2 YEARS	DUPHTHALMUS R	R = 47 MM. L = 17 MM.	OCT. 3, 1947 R		ANTERIOR CHAMBER NOT REFORMED. CLOUDY LENS, SUB-LUXATED.	GONIOTOMY R: 10-3-47 ENUCLEATION RIGHT EYE: 12-12-47	JAN. 10, 1948 L = 23 MM.
13. W. B. 6 YEARS	FULL-TERM, NORMAL DELIVERY	FIRST	2 MONTHS	6 YEARS	R & L	R = 38 MM. L = 30 MM.	MAY 19, 1948 R & L			GONIOTOMY R & L: 6-28-48	SEPT. 9, 1948 R = 12 MM. L = 14 MM.
14. L. F. S. 6 1/2 YEARS	FULL-TERM	FIRST	12 MONTHS	6 1/2 YEARS	R & L	R = 24 MM. L = 70 MM.	MARCH 8, 1948 L		MODERATE PAIR EYE. STILL UNABLE TO SEE	ANTERIOR CHAMBER OF LEFT EYE FILLED WITH FLOOD.	MARCH 2, 1948 UNABLE TO USE TONOMETER BECAUSE OF PAIR; R = SOFT; L = INCREASED TO FIBER PALPATION.
15. J. E. C. 10 YEARS	FULL-TERM, NORMAL DELIVERY	FIRST	INFANCY	4 YEARS	NO. L.P. R	R = 65 MM. L = 22 MM.	OCT. 5, 1947 L	INTENSE KERATITIS, IRITIS AND UVEITIS		FURTHER SURGERY CONTRAINDICATED BECAUSE OF IRITIS. FEVER THERAPY GIVEN	MARCH 4, 1948 R = 8 MM. L.P. L = 73 MM. 20/50
16. J. A. B. 17 YEARS	FULL-TERM	THIRD	INFANCY	17 YEARS	R	R = 8 MM. L = 40 MM.	MARCH 8, 1948 L	MODERATE IRIS BLEEDING, FOLLOWED BY REPEATED ATTACKS OF IRITIS. JAN. 4, 1949 IRITIS RECURRENT	ZONULES OR MEDIAL ASPECT RUPTURED. MARKED CORNEAL FLARE	OS BALANCE WAS UPSET. RECURRENT IRITIS HAS DEVELOPED. TYPHOID AND ATROPINE THERAPY.	NOV. 20, 1948 R = PATHOLOGIC L = 20 MM.
17. A. T. 10 YEARS	FULL-TERM	SECOND	2 MONTHS	10 YEARS	R & L	R = 48 MM. L = 48 MM.	OCT. 1, 1948 R & L	IRITIS BLEEDING		PARACENTESIS R: 10-1-48 GONIOTOMY R: 10-4-48 GONIOTOMY R & L: 1-10-49	MARCH 4, 1948 R = 70 MM. L.P. L = 66 MM. L.P.

Table I. Series of 17 Cases, Divided Into Two Age Groups

trolled for several months, it will remain so.

In Group II, aged 3½ to 17 years, the goniotomies were unsuccessful in six of seven cases. It is suggested that this is because the canal of Schlemm and spaces of Fontana have become obliterated by the long continued pressure. In these cases, early recognition and prompt treatment might have resulted in vision instead of blindness.

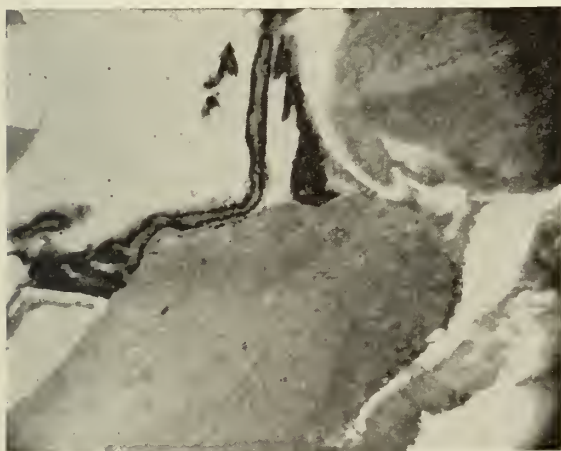


Fig. 9. (Case No. 10). Microscopic section from eye removed after fatality. The site of the incision through the sclera can be seen.

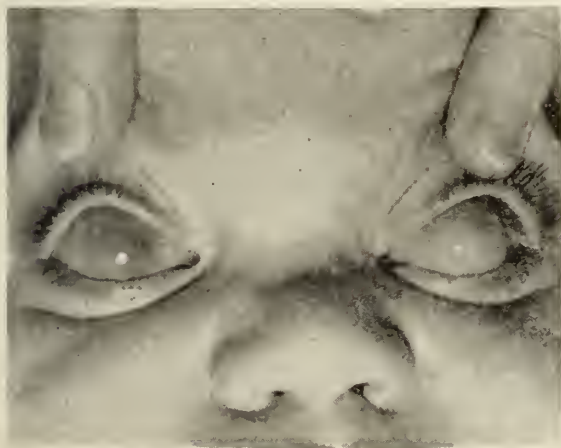


Fig. 10. (Case No. 17). Congenital glaucoma not seen by ophthalmologist until time of this photograph; age of patient, ten. The cloudy cornea and buphthalmic eye are typical of untreated congenital glaucoma.

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Active Immunization in Private Practice—The striking accomplishment brought about by introduction of a specific immunizing agent, as that against smallpox, tends to discount the importance of the contrasting general preventive methods which over the years must be credited with the greater performance. These general measures flow from many sources. The most fundamental is that of environmental sanitation, dominantly a contribution of society made possible through education and organized public health agencies. It was long ago pointed out that the first step of a people in an approach to public health is to get up out of their own dirt. This involves a good deal more than attention to food, to water and to milk; it brings into play the whole question of insect vectors, of the reservoirs of infection that reside in animals, and, perhaps most important of all, those socio-economic factors that so strongly influence disease, the things that come about through the simple association of man with his kind.

The improved quality of medical care is an additional consideration. Even the most elaborate and perfected programs of prevention have their failures; under most circumstances the number who unavoidably or accidentally become infected is appreciable. The fewer deaths and the lesser disabilities that follow because of improved methods of medical management are as clear a gain, and as certain a contribution to prevention as the results that come from specific preventive measures.

The tendency exists to think of these general measures as having contributed principally to such diseases as dysentery and typhoid fever. Their influence has been exerted as well on all the other great classes of infections, if with varying emphasis—on the parasitic, the protozoal, the respiratory diseases and the rest. The measure of accomplishment originating in these general measures is great. It tends to be discounted. Environmental sanitation and good medical care continue to be the foundations of an improving public health.

Direct and specific methods of prevention are not limited to active immunization. Lacking a method for long term active protection against a disease, use has been made of the short-term passive protection afforded by passive immunization, first through horse serums, a method largely discarded, then through convalescent serums, and in recent years through use of fractions of normal or immune serum that contain the major concentrations of immune bodies. Gamma globulin is relied upon for specific prevention of measles and epidemic hepatitis.—*Gordon, Connecticut State M. J.*, June '49.

THE JOURNAL

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PULMONARY EMBOLISM

"The incidence of autopsied cases with demonstrable pulmonary embolism has dropped only from 7.5 to 6.7 per cent since the use of definitive and prophylactic treatment of venous thrombosis, including venous interruption and the administration of heparin and dicumarol.

"The decrease is slightly greater when the percentage of deaths coming to autopsy with pulmonary emboli is compared to the number of operations performed, rather than to the total number of autopsies done. . . .

"A study of the 74 cases autopsied from 1941 through 1946 was undertaken to help explain this relatively insignificant change.

"In only 5 of the 74 cases of pulmonary emboli did the patients receive specific therapy for the prevention of embolism. This suggests that the primary problem is the difficulty in the diagnosis of venous thrombosis and nonfatal pulmonary embolism.

"Despite the availability of various means of preventing pulmonary embolism the condition remains a great problem."

1. Dehlinger, Klaus and Riemenschneider, Paul: Pulmonary Embolism, *New England J. Med.* 240:497 (March 31) 1949.

The above are the conclusions in part drawn by Dehlinger and Riemenschneider¹ after their recent study of this entity. The Boston investigators have called attention to a condition that proves highly vexatious even in the best and most splendidly equipped institutions. It is rather discouraging to read that the newer methods of treatment, including venous interruption and the use of heparin and dicumarol, are not as yet too efficacious even in the most skilled hands. And the authors are indeed upon firm ground when they warn us that "thus, despite the many enthusiastic reports on venous interruption and anticoagulant therapy for the prevention of pulmonary embolism, the problem is still far from solved, and the careful search for the slightest symptoms suggestive of venous thrombosis and pulmonary embolism remains a most important responsibility of every physician."

A CORRECTION

In the article on Congestive Heart Failure by Dr. R. Olney Russell that appeared in the June number of the *Journal*, pages 349-352, the dosage of Digitoxin was expressed in grams. It should have been milligrams in every instance.

Need for Love—The need for love is one of humanity's greatest hungers and many other emotions are dependent upon it. From the cradle to the grave humans struggle for it. Some of them have a great love hunger and either have no recognition of what they need or have no technics for obtaining it. Lack of it brings such untoward emotions as frustration, hurt pride, envy, and jealousy. Others have perverted and symbolic ways of obtaining it through excessive use of alcohol, food, sex, or drugs. Others know they need affection, attention, and rewards, and take the conventional kind of actions and responsibilities which bring them. The need for love and its derivatives of approval, appreciation, and recognition is a most important emotional need and sufficient gratification of this emotion is of the greatest importance to health both physical and mental.

There has been a general reluctance to accept the need for love as an actual necessity for health and happiness. It has not had the same scientific standing as a health factor as the chemical symbol for iron, for example, but the more we study man and his various illnesses the clearer it becomes that he can live neither a healthy nor a wholesome life without it.—*English, New Orleans M. & S. J., June '49.*



FRANK C. WILSON
President of the Association
1949-1950

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THEY ALSO SAY

W. A. Dozier, Jr.
Director of Public Relations

The second most frequent complaint that is heard deals with night calls. In the May number of the Journal the matter of cost of service was reported. As in the previous report, there are many sides to this issue of night calls; but the public is looking to the profession for an answer to the problem. As in the case of costs, people feel that the answer must come from the physicians, and in most instances the public is willing to help. The most prevalent feeling seems to be this: a realization that physicians are human and must have rest, that there is a shortage of personnel which places an added burden on the profession, but that some means must be devised whereby people may get twenty-four hour medical care.

The situations that one hears of are many and varied. Only a few can be related here. These are repeated as told to me without any attempt at this time to delve into the various reasons behind them. One lady relates how her brother became ill in the middle of the night. The family physician was out of town and no alternate had been designated. After delay and after calling six physicians, she was able to get the seventh to make a house call at night. The man had had a heart attack and died that morning. This lady admits that maybe the doctor could not have saved her brother but there will always be a question there. Perhaps he would be living today if he could have gotten attention sooner.

One man tells of calling a physician one night. The doctor refused to come out but told the man to go to the hospital and the nurse would be instructed in what to do. The man's feeling was that he wanted the doctor, not his nurse.

One man on being refused a night house call flatly said for the doctors to wait until we have socialized medicine and then they would make night calls and like it. These are only a few examples. In most of them there were mitigating circumstances, but

these circumstances did not keep the people from criticizing or from holding a personal grudge against the profession.

When one tries to see behind this situation and find the causes, it is found that, as usual, there are many. Perhaps the greatest one is the shortage of physicians. Add to this the increasing health consciousness of the public and you have a formidable situation with which to cope. Others, both in the profession and out of it, say the cause lies in a change of thinking and a lack of dedication to service. They say that the doctor just won't make night calls. Perhaps this too is a cause in some instances.

Often a call has to be refused because the person is someone else's patient. The patient in such a case very seldom understands why you cannot serve him. Then, of course, there are always a certain number of people who call for trivial troubles and will always do so. And then there are those who have been ill for a day or two and call at two A. M. These last two are the hardest to understand, but in the latter case it must be realized that the situation often becomes an emergency in the mind of the patient only at the time the call is made.

In trying to put all the scattered bits of information together, it seems that several steps are indicated. Surely a primary step is to indoctrinate the patient against waiting until the middle of the night when he has been troubled for some time with a specific ailment. Also there is a need to get all people to arrange ahead of time for a physician to take them as patients. This is probably needed more in the larger towns and cities than in the lesser populated areas. Also it seems necessary to have, as you do, someone to take your cases when you are away; but often the patient needs to be better informed or more properly impressed on this matter.

And lastly, some system seems necessary to handle emergencies and night calls for patients who do not fall into any of the categories above. It also seems that this is a

problem for each town to handle. It is suggested that the situation be studied by the physicians of each town, that they talk with patients and civic groups about the problem, and that a plan be devised. Then, take your plan to the public and publicize it, explain

the situation as you see it, and ask for cooperation and constructive criticism. Such a plan can be devised, and it would alleviate much of the criticism now aimed at the profession. Such a plan could also make yours an easier life.

WOMAN'S AUXILIARY

Report of the President Mrs. G. G. Woodruff, presented to the Auxiliary in Annual Session, Montgomery, April 20, 1949.

A year ago in Mobile you expressed your faith in me by electing me your President. I trust I have not failed you. As I come to the end of the year, my heart is filled with pride, joy and gratitude: pride, because you elected me to this high office; joy for the warm and deep friendships that I have made while serving you; and gratitude for the contacts and associations which inspired me to help sustain the high ideals of the medical profession.

At this time I take pleasure in presenting my report for your consideration and approval.

I have tried to the best of my ability to carry out the duties of my office, keeping in close touch with the officers and chairmen of the standing committees, and the presidents of the county auxiliaries, rendering whatever help and aid it might have been my privilege to give.

That each member of the Executive Board might become familiar with her duty I distributed handbooks published by the Woman's Auxiliary to the American Medical Association. Since these handbooks are the property of the State Auxiliary I am asking that each one be turned over to your successor.

The fall Executive Board meeting was held at the home of your President on September 30th, with more than thirty women attending, coming from the auxiliaries over the state. Following the luncheon that was served after the board meeting, Mr. W. A. Dozier, Public Relations Officer of the State Medical Association, gave a splendid talk on Service. I have encouraged the auxiliaries to accept Service as our slogan for the year. More than ever before we have had an opportunity of being of service to our parent

body, the State Medical Association, along the line of public relations. We are now sharing with our husbands not only the home but the responsibility of creating a better informed and a healthier nation.

In talks I have made, letters I have written, pamphlets and materials of all kinds that I have distributed, I have insisted that the doctors' wives join forces with the medical profession in the crusade against socialized medicine. The doctors realize the seriousness of this menace not only to the medical profession but to our way of life. They know political medicine is bad medicine; the people must know it too. The threat of compulsory health insurance is real—and the need for public education is urgent. Since the doctor is so busy on the firing line combating disease and death, he has little time to educate the public, so it is up to the doctor's wife to help him meet the challenge.

I urge you to continue your study on health legislation, the bills that have been passed and the ones that are to come before this 81st Congress. Gain the correct information so that you will be able to pass it on to the laity, through your personal contacts and group contacts, such as church, clubs, P.-T. A., or whatever organization you might have any connection with. I urge you to make a study of the Blue Cross-Blue Shield prepaid voluntary hospital insurance plans, their advantages and benefits over the compulsory health insurance plan.

We are not fighting the socialization of one profession only but the eventual socialization of this whole country. Lenin, who said that "Socialization of medicine is the keystone to the arch of the communistic state," gave us our battle cry. Do not let the public forget that this one issue may be the deciding factor in whether our democracy shall live and we shall retain our Ameri-

can way of life. Our forefathers based our Constitution on strong state and local government to avoid the federal powers which might ultimately bring our country under a kingship or dictatorship. The question now becomes: "Shall the U. S. A. remain the U. S. of America or the Union of Socialistic America?"

Our Alabama Senator, Lister Hill, is now sponsoring a bill introduced into Congress March 30, 1949. It is a ten-point health plan as proposed by Dr. G. C. Engel, the President of the Medical Society of the State of Pennsylvania. Make a study of this plan, see how closely it correlates with the A. M. A. twelve-point health plan. Prove to the laity that these proposals are much more beneficial than the ten-year health plan as proposed by the Federal Security Administrator, Oscar Ewing, and President Truman.

I recommend that you continue to encourage young women to enter the nursing profession by giving scholarships, loan funds, and your endorsement to the establishment of a nurses' training course in one of our state schools, whereby a nurse will not have to leave the state in order to secure higher education in her profession.

I have encouraged the circulation of the Hygeia Magazine. I recommend we continue to sponsor the distribution of this magazine, recognizing that it is the most widely quoted and authentic source of information on medical and health matters for the laity. It is the best answer to false theories and plans that beset us. Hygeia is the "Beacon of Truth." We are the dynamo. Just how far the beams penetrate depends on each of us. At this time I am going to congratulate Colbert County on winning a prize in the National Hygeia Contest.

It has been a challenge and an inspiration for me to be privileged to visit some of the different auxiliaries over the state. I attended a luncheon in Gadsden, given by the Auxiliary to the Etowah County Medical Society to the visiting wives accompanying their husbands to the meeting of the Northeastern Division of the State Medical Association. I was happy to assist in the organization of the Auxiliary to the Talladega County Medical Society, and was guest speaker for luncheon meetings in Montgom-

ery, Bessemer and Birmingham, and attended the meetings of the Auxiliary to the Calhoun County Medical Society. I wish circumstances had been so that I could have visited all the auxiliaries.

Two auxiliaries have been organized during the last year, and we hope the ground work has been laid for many more. In the last two years our auxiliaries have doubled in number. With Mrs. Rosser at the helm this next auxiliary year, it is possible that our present number can be doubled. I recommend that each member give Mrs. Rosser her help, and let us make it our slogan, "Every doctor's wife in Alabama an auxiliary member."

I have asked the auxiliaries to study their health needs and projects in their counties and assist in every way they can in health education. Many have made outstanding contributions. Mrs. Rosser was elected a life time honorary member of the National P.-T. A. Congress for the excellent work she did with the deaf in Birmingham. I recommend that the auxiliaries continue to study the health projects in their communities and give their support to those projects that have been approved by the County Medical Societies. Let me recommend that we familiarize ourselves and give full support to our two State Scholarship Funds. You will hear of both of these from the splendid work that has been done by the committee chairman

The Auxiliary has been given unlimited space in the Alabama State Medical Journal. Read the Auxiliary page carefully. Call your husband's attention to it. I recommend that you take advantage of this opportunity to publicize your good works and make many contributions to the Journal in the next year.

I have accepted an invitation from the President of the Woman's Auxiliary to the Medical Association of Georgia to attend the celebration of their silver anniversary, when they meet in Savannah, Ga., May 10-13. When I carry greetings from the Auxiliary to the Medical Association of the State of Alabama I am sure I can be sincere in expressing to them your best wishes. In the short time I shall have to give Alabama's report when the American Medical Association convenes in Atlantic City, June 6th, I

shall take pride in stating outstanding accomplishments for the year.

A detailed report will be written and published in the Bulletin. It will be a report of your activities. So please read carefully the Bulletin. Through it you will find the best way to acquaint yourselves with the proceedings of the county-state-and national auxiliaries.

I recommend an increase in subscriptions to the Bulletin. It contains splendid information that could be used as program material for your auxiliary.

The success we have enjoyed this year has been the result of the cooperation of the state officers and chairmen of committees, the county presidents and each member. Our county auxiliaries have accomplished much and to them I wish to pay tribute for their fine work. It is their efforts that make our state and national groups develop. Because of you, my life has been richer and fuller. I shall forever cherish the friendships and contacts made during the last year.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

WATCH YOUR VACCINATIONS

Contributed by
H. P. Sawyer, M. D.
Director of Laboratories

For years you have heard a great deal about preventive medicine in one way or another. It may seem to some of you that it has been overemphasized at times. But we of the Health Department would be seriously remiss in our duty if we did not continue to try to impress you in every possible way with its importance, for it certainly is of overwhelming importance. That threadbare old saying, "an ounce of prevention is worth a pound of cure," is truth itself, especially when applied to preventive medicine. The subject has many aspects and angles of approach, and it is one of them with which this article deals.

First, a few words of history. Edward Jenner, 153 years ago, produced the vaccine against smallpox. For 112 years thereafter the term "vaccination" meant only the prevention of smallpox. All the rest of the preventives that we use today have been developed in the last forty years, so, during that time you have been hearing more and more about them. And it has done some good, too. Most of you have become convinced of the value of preventive medicine and have been making use of it. Right there lies a danger against which I should warn you.

For a century after its introduction, smallpox vaccine was supposed to confer a lifetime immunity, provided the first vaccination "took." Gradually, though, it became known that once in a while a vaccinated person did come down with smallpox and that the newer vaccines were also not 100 per cent effective. Two of the best assets of medical scientists are an insatiable curiosity and a stubborn skepticism. These traits soon turned many of our best medical minds toward this question. Would a single vaccination protect for a lifetime? If not, why not? Was it due to some fault in vaccine production, to wrong dosage, or to some quirk in the response of the patient? If an occasional person could have a second attack of typhoid, smallpox, yellow fever, cholera and the like, they felt it idle to expect an artificially produced immunity to be stronger or more lasting. They gradually found that production and dosage should be changed somewhat but, most of all, that people differed widely in the amount and permanence of the immunity gained.

Smallpox vaccination does seem to protect longer than others but it is not infallible. Lately, when an alien visitor to our shores suddenly came down with it, there was consternation in New York City. In the flurry, did the city health authorities pay any attention to who had been successfully vaccinated or who had not? They most certainly did nothing of the kind. They vaccinated hundreds of thousands, regardless.

For years the Canadian borders of Maine, New Hampshire, Vermont, New York and Michigan were upset every little while by cases of smallpox filtering across the line from the provinces where there was no compulsory vaccination. I well remember that secondary cases too often developed even among our own well vaccinated population.

Our Army furnishes vast and authentic information about all phases of typhoid vaccination. When we first started work on it we thought that one course of three injections would give unlimited protection. After careful investigation it was realized that mild cases might occur as soon as the second year after the first course of vaccine. That such cases were mild did not alter the fact that any case of typhoid is no thing to have around. The milder, the more dangerous, because they were often not diagnosed before they had infected several non-immunes. Then we thought that a repetition of the full course every three years would be sufficient but further study proved that even this was not always true.

To make as sure as possible about this, the so-called mouse protection test was used. In this test, the blood serum of a vaccinated person is injected into mice and subsequently varying amounts of live typhoid bacilli are given these mice to see how much protection the serum afforded them. If the serum protects the mouse against 100 times the amount of typhoid bacilli that would kill an untreated mouse, it is considered that the person from whom the serum came is immune to typhoid. Thus, it is shown that a course of vaccine will protect a person against 10,000 to 20,000 times the usual fatal dose within a month. But, and this is the important part for you, this test shows that this high grade of protection almost immediately begins to wane and, in some people, may go below the 100 mark within a year or two. Of the men vaccinated two or three years previously, 47 per cent have insufficient protection left. At first this was alarming to us in the Army.

However, we found that one small drop of vaccine injected into—not under, but *into*—the skin, would raise the protection mark of all these men anywhere up to the 20,000 level. This still is the best way to keep up full immunity. It is quick, simple, gives no unpleasant reaction such as the full

course does and protects better than a repetition of the full course. It should be done every year or, at least, every other year after the initial course.

I was one of the guinea pigs they used in this investigation. It was nine years since my last course of typhoid vaccine and my protection was well below the 100 mark. They gave me a drop into the skin of my arm. I did not feel the prick of the needle at all and only a slight itching for about ten minutes. Fourteen days later my protection had risen to over 20,000. This method is commonly called the “booster shot” and is by far the best way to get the results. If, for one reason or another, it is impossible to use it, injection *under* the skin of 0.5 cc. *every* year is next best.

A menace that will always be with us as long as there is any typhoid left is the “carrier.” The carrier, as you may know, is a person who has had typhoid and who, even years thereafter, harbors live typhoid germs in the urine or stool. Anyone who is not protected is in danger of contracting it from contact with such a person. The carrier is not aware of his condition and he cannot be identified as one except by expert bacteriologic technique. So, he may go for years, sowing the seed of typhoid here and there until the trail leads back to him.

I have gone into this much of detail on this subject so that you may see that I speak with authority.

It is probably no news to you that we have had an epidemic of diphtheria in Alabama during the last few months. It has not been severe, so, you may ask, “why get excited about it?” This is the reason. Some strains of diphtheria bacilli are very weak. They can hardly produce a recognizable case, they are so puny. But, if you pass some of these weak bacilli on to an animal, human or otherwise, they become stronger. The first transfer may strengthen them enough to produce a real case. The second almost always does. So, if you have many very mild cases, you are bound to have them transferred to other persons and from them to others, with the result that their disease producing power may be stepped up dangerously. When you think of the paralyses that sometimes complicate even mild diphtheria, you realize that you do not want any of them around. And not only paralyses.

Heart infections, pneumonias, abscesses of the throat and mastoid cells all may follow or accompany diphtheria.

Ever since the introduction of antitoxin there has been a tendency to think somewhat in this way: Well, why worry? Here we have a sure cure for diphtheria. Take it and you will get well. The truth is, you are not always as safe as you think. It may not be given early enough for a sure cure. If you are as sensitive as some people are to the injection of horse serum you may have a most unpleasant case of serum sickness as a result. The old romanticist Tennyson wrote, "Tis better to have loved and lost than never to have loved at all." That may be true enough in regard to the tender passion but it certainly does not make sense when you are talking about diphtheria—or any other communicable disease either.

Let us look at the figures of this epidemic. For 11 months of 1948 there were 552 cases in Alabama. There were 358 in 1947.

There was a definite increase over last year all through the 11 months but, with the start of the schools in September, the figures rose rapidly. For September, October and November there were 370 cases. This was 65 per cent of all cases for the 11 months of 1948: more than for all of 1947.

It is predominantly a disease of white children: 81 per cent were white and 19 per cent were colored

Over half (52 per cent) occur between the ages of 2 and 6.

Immunity figures were reported in 286 cases. Of these, 213 (74.5 per cent) had never been given any preventive shots at all, 31 had had one preventive dose; 42 had had complete immunization; 73 had been immunized but 47 of these had not been immunized for over three years.

The 358 in 1947 were about the usual number; still, 358 is exactly 358 too many. We have the same carrier menace as we have in typhoid but both can be wiped out by careful attention to prevention. We have tests that will tell us whether or not we are protected against typhoid and diphtheria so there is no excuse for neglecting them. Vaccines against cholera, yellow fever and typhus given to our troops before service in the C. B. I. area were uniformly successful in preventing these scourges among our men. While these diseases are of only mild

concern to us here at home, they might be serious if our preventive measures were relaxed. This relaxation was the the sole cause of our diphtheria epidemic.

You can be immunized these days against typhoid, diphtheria, whooping cough, and tetanus (lockjaw), and you can get treatment for rabies (hydrophobia) if exposed which amounts almost to immunization. You can immunize your dogs to rabies and, in so doing, largely prevent the spread of this dread infection. If you should ever see a human being with rabies or tetanus you could never forget the horror of it.

The foregoing may give you the impression that our vaccines are really no good. That is far from the truth. For the majority of people they do what is expected of them if that majority does not neglect them too long. It is those who neglect them or who too easily lose their immunity that constitute a real menace to the public health. If you want to be safe you must understand the necessary measures and take some responsibility on your own shoulders for carrying them out. Your doctor can give you the means and the advice. Find out from him. Thus, and thus only will you be secure. Eternal vigilance is the price of safety. It is a pity that we seemingly have to have epidemics to point this moral.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

MARCH 1949

Examinations for diphtheria bacilli and Vincent's	322
Agglutination tests (typhoid, Brill's and undulant fever)	1,278
Typhoid cultures (blood, feces and urine)	481
Examinations for malaria	367
Examinations for intestinal parasites	3,937
Serologic tests for syphilis (blood and spinal fluid)	27,856
Darkfield examinations	15
Examinations for gonococci	2,400
Examinations for tubercle bacilli	3,173
Examinations for meningococci	3
Examinations for Negri bodies (microscopic)	106
Water examinations	1,371
Milk and dairy products examinations.....	4,300
Miscellaneous	271

Total 45,880

APRIL 1949

		Mar.	Apr.	E. E.* Apr.
Examinations for diphtheria bacilli and Vincent's	154	2	4	4
Agglutination tests (typhoid, Brill's and undulant fever)	1,185	11	11	12
Typhoid cultures (blood, feces and urine)	425	2	14	64
Examinations for malaria	392	0	0	0
Examinations for intestinal parasites	4,441	2911	2904	834
Serologic tests for syphilis (blood and spinal fluid)	24,764	64	47	64
Darkfield examinations	13	52	29	163
Examinations for gonococci	2,210	20	21	23
Examinations for tubercle bacilli	3,152	573	981	433
Examinations for meningococci	0	222	229	207
Examinations for Negri bodies (microscopic)	107	2	3	2
Water examinations	1,381	0	1	1
Milk and dairy products examinations	4,597	269	332	175
Miscellaneous	307	2	3	2
		308	265	249
		2	0	5
		6	7	16
		335	381	371
		897	800	1585
		13	8	13
		412	496	488
		0	2	1
		5	5	7
		11	6	1
		374	342	164
		0	0	0
		32	42	0
Total	43,128			

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MAY 1949

		Apr.	May	E. E.* May
Examinations for diphtheria bacilli and Vincent's	176	4	4	8
Agglutination tests (typhoid, Brill's and undulant fever)	1,262	11	10	19
Typhoid cultures (blood, feces and urine)	510	14	7	199
Examinations for malaria	614	0	0	0
Examinations for intestinal parasites	4,338	2904	1165	806
Serologic tests for syphilis (blood and spinal fluid)	27,544	47	20	34
Darkfield examinations	14	29	72	191
Examinations for gonococci	2,237	21	9	21
Examinations for tubercle bacilli	2,955	981	251	179
Examinations for meningococci	0	229	168	159
Examinations for Negri bodies (microscopic)	134	3	13	2
Water examinations	1,518	1	0	1
Milk and dairy products examinations	4,415	332	221	129
Miscellaneous	282	3	1	4
		265	166	287
		0	0	5
		7	10	11
		381	152	287
		800	1661	1849
		8	8	18
		496	435	607
		2	1	1
		5	4	7
		6	1	1
		342	378	171
		0	0	0
		42	47	0
Total	45,999			

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	Feb.	Mar.	E. E.* Mar.
Typhoid	1	2	6
Typhus	9	11	11
Malaria	5	2	56
Smallpox	0	0	1
Measles	2012	2911	804
Scarlet fever	64	64	88
Whooping cough	28	52	115
Diphtheria	26	20	28
Influenza	414	573	1275
Mumps	160	222	259
Poliomyelitis	3	2	2
Encephalitis	0	0	1
Chickenpox	369	269	175
Tetanus	1	2	2
Tuberculosis	200	308	226
Pellagra	1	2	3
Meningitis	12	6	16
Pneumonia	341	335	488
Syphilis	537	897	1307
Chancroid	6	13	15
Gonorrhea	364	412	519
Tularemia	3	0	2
Undulant fever	2	5	6
Amebic dysentery	2	1	1
Cancer	225	374	165
Rabies—Human cases	0	0	0
Positive animal heads	30	32	0

TRANSPORTING CASES OF POLIOMYELITIS

Released by

Hughes Kennedy, Jr., M. D.

Associate Medical Director

Jefferson County Chapter

National Foundation for Infantile Paralysis

Birmingham, Alabama

Transporting a case of poliomyelitis during the febrile period is serious and can have a fatal outcome. Rest, sleep and minimal disturbance are the greatest therapeutic agents and any procedure that disturbs the comfort of the patient while he has fever is dangerous.

All poliomyelitis deaths which have occurred at the Jefferson-Hillman Hospital during the past three years have been bul-

bar cases. All were moved long distances, usually at night, during the acute febrile stage. All were exhausted on admission and a stormy course of progressive ascending poliomyelitis followed even though some of these cases were apparently of a mild form at the onset.

The staff at the Jefferson-Hillman Hospital firmly believes that the exhausting trip during the critical first two or three days of illness was the chief factor contributing to violent progress of infection and resulting in fatal bulbar involvement.

RECOMMENDATIONS

It is recommended that where possible, all cases of known or suspected poliomyelitis be disturbed and moved as little as possible until the febrile stage has passed. This period averages five days. If transportation is necessary it should be done as comfortably as possible with a minimum of strain for the patient.

When practicable it is better to treat mild forms of poliomyelitis in the home on bed rest and any comfort producing procedure such as hot packs. Hot pack treatment and other routine procedures used in managing poliomyelitis are only comfort producing and are not life saving or emergency measures. Sleep should not be interrupted.

If a child can be carried through the first five days at home, or at a local hospital, he usually can be moved safely and comfortably.

The three centers for the treatment of acute poliomyelitis are Mobile, Montgomery and Birmingham. Convalescent cases (over 14 days) can be checked at these centers for further care by contacting local Poliomyelitis Foundation facilities.

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

RECIPROCAL QUALITY MILK CONTROL

Contributed by

R. C. Burkhardt, B. S.

Principal Sanitarian

Milk control did not spring into being all of a sudden. It was born in necessity. It developed slowly and painfully, usually by trial and error. It now is a complex structure of laws, regulations and practices, written and unwritten. Officials maintain it, the public expect it, and the industry, trade and the public bear it.

Originally, milk control was instituted as a public health necessity. The abuses in the production and handling of milk forced public health officials to inaugurate protective measures to reduce the health hazard from the consumption of infected milk. This work received a great impetus in this country soon after the turn of the century through the publication of studies on the epidemiology of milk-borne disease.

In 1923 milk sanitation became a definite activity of the U. S. Public Health Service, Division of Scientific Research. At that time the Alabama State Board of Health, feeling the need for a state-wide milk control program, requested the assistance of the Public Health Service in the development of the milk ordinance which is now known as the U. S. Public Health Service Milk Ordinance and Code.

With the growth in the number of adoptions of this milk ordinance, it soon became evident that, even though a number of communities adopted the same milk ordinance, the interpretation and enforcement of the ordinance was not uniform, mainly because of the lack of qualified persons doing quality milk control. This fact led to the formulation of the U. S. Public Health Service Milk Code. The code discusses the standard milk ordinance item by item, outlines in each case the public health reason, and gives what is recommended as satisfactory compliance.

In the development of the milk ordinance and code, considerable research has taken place. In 1932 the Public Health Service appointed a board of consultants, known as the Public Health Service Milk Sanitation Advisory Board, so that it might have at its command the technical advice of a comprehensive group of experts in the various phases of the public health control of milk supplies, and its allied problems relating to the production, processing, and distribution of milk. The various suggested modifications of the milk ordinance and code that are received from time to time are presented to the Advisory Board for discussion and recommendation and when approval is given on an item or subject it is included at such times as revisions in the ordinance or code make advisable the publication of a new edition.

It is sufficient to say that these quality milk control measures have been effective. Disease from milk-borne vectors practically disappeared from those communities that have made real effort to improve milk sanitation.

This success has brought about in a number of localities a degree of justifiable satisfaction or pride in the adequacy of their local milk ordinances, and has led to a feeling of superiority and self-sufficiency over other communities. Some built up their own system of control and boasted that they had the best milk in the country.

Through the years the outcome of all these regulatory efforts has operated to surround the production and handling of milk with a great system of physical requirements on dairy farms and in milk plants.

For example, a few of the requirements of different in and out-of-state municipal inspectors differ to the following degree: in one instance milk house windows must be opened and screened, in another they dare not be opened; in some markets open pails are insisted upon while, in others, only hooded pails are permitted; some markets require the barn gutter to be of exact depth, shape, etc. In most, or at least some, cases, these differences in inspection requirements do not change the quality of the product in the least. They serve simply as trade barriers and to confuse the producer.

Health Departments should take steps now to correct the confusion created by multiple inspection by different agencies, each requiring the milk producer to conform to its own requirements. There is a common ground upon which all should meet, settle their differences, and proceed with a reciprocal united front to the mutual benefit of all.

It would seem that the adoption and enforcement of the U. S. Public Health Service Milk Ordinance and Code would offer such a solution. This agency is now undertaking to issue periodically a list of interstate milk shippers and of supplies available for interstate shipment. These lists are intended to acquaint areas experiencing milk shortages with available sources and their sanitary ratings, in order that health authorities of receiving areas may feel justified in accepting shipments from beyond their milk sheds without sending their own inspectors to the producing areas.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MARCH 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During March 1949			March Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	6504	**	**	25.0	26.4	28.9
Total stillbirths	187	**	**	27.9	34.5	38.8
Deaths (stillbirths excluded)	2442	1321	1121	9.4	9.4	9.3
Infant deaths:						
under one year	272	118	154	41.8	42.8	39.8
under one month	170	84	86	26.1	28.0	20.3
Cause of Death						
Tuberculosis, 001-019	62	25	37	23.8	29.2	40.0
Syphilis, 020-029	20	3	17	7.7	11.1	11.2
Diphtheria, 055	1	1		0.4	0.8	1.9
Whooping cough, 056	2	1	1	0.8	3.4	6.6
Meningococcal in- fections, 057	2		2	0.8	1.5	1.2
Poliomyelitis, 080, 081					1.5	
Measles, 085	7	5	2	2.7	0.8	0.8
Typhus fever, 100-108						0.4
Malaria, 110-117	1		1	0.4	0.4	
Malignant neoplasms, 140-200, 202, 203; †	233	169	64	89.4	88.7	78.4
Diabetes mellitus, 260	34	18	16	13.0	11.1	12.0
Pellagra, 281	4	2	2	1.5	3.1	3.5
Vascular lesions of central nervous system, 330-334	281	129	152	107.9	94.4	99.7
Other diseases of nervous system, 300-318, 340-398	44	21	23	16.9	7.8	***
Rheumatic fever, 400- 402	6	2	4	2.3	2.7	***
Diseases of the heart, 410-443	744	459	285	285.6	235.3	199.1
Diseases of the arte- ries, 450-456	36	21	15	13.8	6.5	10.9
Other diseases of the circulatory system, 444-447, 460-468	35	15	20	13.4	4.2	***
Influenza, 480-483	29	10	19	11.1	15.4	23.7
Pneumonia, 490-493	126	51	75	48.4	59.1	63.6
Bronchitis, 500-502	5	1	4	1.9	3.4	3.9
Appendicitis, 550-553	7	6	1	2.7	1.5	4.3
Intestinal obstruction and hernia, 560, 561, 570	7	6	1	2.7	5.4	8.1
Gastro-enteritis and colitis (under 2) 571.0, 764	8	3	5	3.1	2.3	5.4
Cirrhosis of liver, 581	10	9	1	3.8	4.6	4.3
Diseases of pregnancy and childbirth, 640- 689	17	8	9	25.4	18.2	17.0
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	6	2	4	9.0	4.2	2.6
Congenital malforma- tions, 750-759	22	18	4	3.4	3.5	***
Accidental deaths, total, 800-962	135	89	46	51.8	62.6	66.7
Motor vehicle acci- dents, 810-835, 960	59	40	19	22.6	20.3	17.1
All other defined causes	413	206	207	158.5	196.9	208.4
Ill-defined and un- known causes, 780- 793, 795	151	43	108	58.0	68.7	71.4

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates based upon the March report of the years specified.

** Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia, (204), and mycosis fungoides (205).

BOOK ABSTRACTS AND REVIEWS

The Business Side of Medical Practice. By Theodore Wiprud, Executive Director and Secretary of the Medical Society of the District of Columbia, and Managing Editor of the Medical Annals of the District of Columbia. Second edition. Cloth. Price, \$3.50. Pp. 232 with 22 figures. Philadelphia and London: W. B. Saunders Company, 1949.

The doctor is commonly regarded as a poor business man and has all too often himself provided the proof of this accusation. It is perhaps timely that a business man, who has long been associated with the business side of medicine, sets down his observations and makes suggestions for the improvement of the business side of any practice. The author has been intimately associated with physicians for many years and his association has been both with doctors in the city and in the rural areas. For many years he was business manager of a large medical group and later served as executive secretary of a large county medical society. Based on his observations of the doctor as an individual and as a group, Mr. Wiprud dares to try to stimulate the practitioner's interest in his own personal affairs. There is no "medicine" in this book but there is much to stimulate the interest of every physician.

Mr. Wiprud discusses personal efficiency of the doctor and devotes much attention to the proper operation of a practice and to the business side of medicine. He discusses legal angles, such as wills, estates, giving testimony in court, and the doctor's own legal responsibility. There is much sound advice on the doctor's relationship with the public, with the press and with other doctors. Some consideration is given to the problem of ethics among doctors and, finally, a rather philosophical discussion is made about the future of medicine.

All too few doctors know enough about the business side of practice, but, unfortunately, too many doctors have already formed bad business habits. Such physicians may find here advice for improving their business practices to their own economic betterment. This volume should be invaluable to a young man just entering the practice of medicine who so often complains that no one has ever told him about the Business Side of Medical Practice.

J. M. Barnes, M. D.

Aesculapius Comes To The Colonies. By Maurice Bear Gordon, M. D. Cloth. Price, \$10.00. Pp. 560, illustrated. Ventnor, New Jersey: Ventnor Publishers, Inc., 1949.

Perhaps it would be untrue to say that the colonial period is the blind spot of American medical knowledge. Benjamin Rush and a number of other doctor-authors of that time have

thrown a strong light upon the practice of medicine in the decades before and shortly after this country won its independence. But the average person, physician or layman, knows a great deal less about the healing art and its practice during America's infant decades than he knows about medical progress during the first century and a half after the Revolution.

Dr. Gordon was especially conscious of that fact. So he decided to do something about it. *Aesculapius Comes To The Colonies* is the result.

This physician-turned-writer gives us an unusually broad picture of the life of the physician in colonial times. It was not a very pleasant life. And, because it was not the sort of life to appeal to men of erudition, there were comparatively few physicians among the early colonists.

"Medicine, in this outpost of civilization, like all arts, must decline over the standard of the Old Country," Dr. Gordon tells us. "The doctor was a luxury that the hard-working colonist could ill afford. Thus, more often than not, the duties of the physician were undertaken by the village priest, who was the only one who had any time for intellectual pursuits."

It will be of interest to present-day men and women of medicine to learn (from Dr. Gordon) that hardly anybody thought of depending upon his medical practice for a livelihood. This was part-time work, to be done after making sure of life's necessities by means of other kinds of work. Besides the ministry, teaching, government service, farming and store-keeping provided most of the bread-and-butter jobs that supported early American medicine. As time went on, fees from medical practice became larger and more frequent. In time medical practitioners were able to stand on their own feet financially, without a lift from non-medical work.

As might be expected, early colonial physicians were trained in the medical schools of England and Europe. While putting their expensively obtained knowledge to use, they often served as teachers under a medical apprentice system. In that way they made possible a second generation of medical men who did not find it necessary to leave American shores to learn the fundamentals of their science.

After discussing colonial medical practice in broad terms, Dr. Gordon takes his reader on a state-by-state voyage into medical colonial America. As Alabama was not one of the thirteen original states, it is not included in this literary safari. But Alabama doctors can learn a great deal and get a great deal of pleasure from reading about the trials and conquests of their professional ancestors in other parts of the country.

Dr. Gordon has been unusually fortunate or diligent in his search for pictorial material. His book contains a millionaire's wealth of photo-

graphs, documents, newspaper clippings, advertisements, etc. So it is interesting to look at and through, as well as to read.

John M. Gibson.

Current Therapy 1949. Latest Approved Methods of Treatment for the Practicing Physician. By Howard F. Conn, M. D., Editor. Consulting Editors: M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, and Robert H. Williams. Cloth. Price, \$10.00. Pp. 672. Philadelphia & London: W. B. Saunders Company, 1949.

This book represents the newest and perhaps most successful effort to give the practitioner of medicine information on the very latest methods of treatment. This volume is not simply a review of recent literature but is an up to date compilation of treatment methods that are endorsed by and currently used by an authority. It is the plan of the publishers to keep this work up to date by the most frequent revisions possible. Such a large task requires the combined efforts of numerous authors, each an authority in his field. The editor, Dr. Howard F. Conn, is supported by a treatment board of consulting editors. This board, in turn, selected authors, each of whom was an authority in his field, to write articles on specific treatment of given diseases. As a result of this method, over two hundred leading physicians are contributors to this volume.

Proper diagnosis is always presumed to have been made when discussion of treatment is begun. No effort is made in this book to go into lengthy discussion on the establishment of a diagnosis. On the contrary all effort has been concentrated onto the single theme of treatment. This one provision should facilitate the effort to keep this volume up to date in succeeding years. An important feature of this book is the fact that more than one method of treatment has been outlined for many diseases. Since comparatively few diseases are amenable to just one method of treatment, this method of detailing several plans of treatment should be of great help to any practitioner in formulating his own plan of treatment for a particular case.

This book is divided into fourteen sections for easy reference and each section has its own table of contents, which is in addition to a general table of contents in the front of the book. The following list of sections demonstrates the broad coverage of disease states afforded by this book:

Section One. The infectious diseases.

Section Two. Diseases of the digestive system.

Section Three. Diseases of metabolism and nutrition.

Section Four. Diseases of the endocrine system.

Section Five. Diseases of the urogenital tract.

Section Six. The venereal diseases.

Section Seven. Diseases of allergy.

Section Eight. Diseases of the skin.

Section Nine. Diseases of the respiratory system.

Section Ten. Diseases of the cardiovascular system.

Section Eleven. Diseases of the blood and spleen.

Section Twelve. Diseases of the nervous system.

Section Thirteen. Obstetric and gynecologic conditions.

Section Fourteen. Diseases due to physical and chemical agents.

It is difficult not to become enthusiastic about this volume, which, if kept up to date, should prove a most valuable therapeutic reference.

J. M. Barnes, M. D.

Eye, Ear, Nose and Throat Manual for Nurses. By Roy H. Parkinson, M. D., F. A. C. S. Sixth edition. Cloth. Price, \$3.00. Pp. 259, illustrated. St. Louis: C. V. Mosby Company, 1949.

The teacher in basic nursing education and the operating room supervisor will find this book a valuable addition to their library.

The book is divided into three parts: the first part, intended for classroom teachers of student nurses, discusses the structure, physiology and diseases affecting the eye, ear, nose and throat. One chapter discusses the examination of patients, describing the equipment needed, instruments used, and treatment indicated.

The second part discusses operating room techniques and procedures and describes the more common operations. Photographs are used to illustrate draping of patients and instruments needed.

Part three is of questionable value for the nurse in public health since the major discussion is medical implications.

Pearl Barclay, R. N.

Mayo Clinic Diet Manual. By the Committee on Dietetics of the Mayo Clinic. Cloth. Price, \$4.00. Pp. 329. Philadelphia and London: W. B. Saunders Company.

This manual contains the dietary procedures which are used to guide the physicians, fellows, dietitians, and dietetic interns and nurses of the Mayo Foundation, the Mayo Clinic and the hospitals in Rochester, Minnesota. This material is now offered in manual form for the guidance of physicians everywhere in their efforts to direct their patients along proper dietary pathways.

The material contained in this manual is not intended for direct presentation to the patient. On the contrary, the information contained in the manual is basic information on which a practicing physician may base his individual prescription diet for a given patient. Such procedure will insure that fundamental requirements of any diet will be met, and at the same time provide sufficient leeway for individualizing the diet as a physician sees best. This manual, therefore, does not represent an "easy out" in the form of a ready-made diet to be torn out and handed

to a patient, but it does afford an excellent and easily accessible source of information for those physicians who are interested in improving the quality of the diets which they prescribe.

A section of this manual has been devoted to consideration of the nutrient values of various food groups. These values, except as otherwise noted, are based on U. S. Department of Agriculture Publications 549 and 572, and should be accurate with the usual acceptable limits. The standard diets contained in this manual have all been tried and proved in the various institutions of Rochester, Minnesota. While these diets are workable, it should be pointed out that certain diets fail to meet complete nutritional requirements. All such diets in this manual have been properly labeled and attention called to the inadequacy of that particular diet so that proper supplemental medication may be added by the physician.

Full and proper use of this manual cannot fail to improve the quality of prescription diets and should make this book valuable to those physicians who are concerned with nutritional requirements of their patients as they are modified by disease.

J. M. Barnes, M. D.

Psychiatry for Nurses. By Louis J. Karnosh, B. S., Sc. D., M. D.; and Dorothy Mereness, A. B., M. N., R. N. Third edition. Cloth. Price, \$4.00. Pp. 437. St. Louis: The C. V. Mosby Company, 1949.

The usual pattern of text for student nurses is followed, including an historical review of psychiatry, the special functions of a psychiatric nurse, psychiatric disorders and the various therapies. The chapters on psychosomatic medicine and mental hygiene are especially good as the authors emphasize the importance of dealing with the whole personality of the sick person no matter what the particular illness may be.

The simple style of this book with the use of case histories commend it as a text for schools of nursing.

Pearl Barclay, R. N.

Care of the Surgical Patient. Including Pathologic Physiology and Principles of Diagnosis and Treatment. By Jacob Fine, M. D., Surgeon-in-Chief, Beth Israel Hospital; Professor of Surgery at Beth Israel Hospital, Harvard Medical School. Cloth. Price, \$8.00. Pp. 544, with 40 figures. Philadelphia and London: W. B. Saunders Company, 1949.

The simple style of this excellent book makes it easy to read and easy to understand.

After briefly covering the useful hints in surgical diagnosis, stressing the use of the doctor's observation and not depending too much on the laboratory, the author discusses fluid and electrolytic balance, nutrition, hemorrhage and traumatic shock, burns, dental disorders, and then takes up each and every organ and system

for a complete, yet simple discussion of that organ's pathological condition.

A number of related subjects usually considered as the internist and dental field are discussed.

The pre- and postoperative care, as well as anesthesia, is covered in the last chapter.

Surgical technique is lightly touched. However, laboratory and diagnostic aids are given considerable space.

This is a thoroughly practical and useful book for the surgeon, and to all physicians who may deal in one way or another with surgical patients.

H. H. Meadows, Jr., M. D.

Campbell's Operative Orthopedics. Edited by J. S. Speed, M. D., and Hugh Smith, M. D. Two volumes. Second edition. Cloth. Price, \$30.00. Pp. 1643, with 1141 illustrations, including 2 color plates. St. Louis: The C. V. Mosby Company, 1949.

Doctors Speed and Smith and their colleagues have prepared a second edition of Dr. Campbell's original work which should go far in perpetuating Dr. Campbell's memory to all newcomers in the specialty for many years. They have added much new material to bring to date the progress that has been made in orthopedic surgery since the publication of the first edition. Intramedullary nailing, amputations, ruptured lumbar discs, and peripheral nerve injuries are some of the subjects which have been included or rewritten. Not every orthopedic operation described for any one condition is included in these two volumes but those generally used successfully are told simply without loss of detail. Indications and after-care are part of these descriptions. These volumes are profusely illustrated.

This second edition is a necessary working instrument for ready reference on the desk of every orthopedic surgeon, general surgeon, traumatic surgeon, and their residents.

Elias N. Kaiser, M. D.

A Manual on Toxic Eye Hazards. Prepared by the Joint Committee on Industrial Ophthalmology of the American Academy of Ophthalmology and Otolaryngology and the American Medical Association. Cloth. Price, \$1.00. Pp. 96, illustrated with charts, graphs, diagrams and photographs. New York: National Society for the Prevention of Blindness, 1949.

There is much to recommend the practice of integrating tuberculosis hospital facilities with those of a general hospital. This is especially true when a general hospital possesses central services and resources which can provide for the additional patient load. Indeed, even where separate construction is practicable, it is desirable to consider locating the tuberculosis unit adjacent to the general hospital, thus permitting the use of common facilities.—Robert J. Anderson, M. D., *Pub. Health Rep.*, Nov. 5, 1948.

AMERICAN MEDICAL ASSOCIATION NEWS

NEW DRUG AIDS TREATMENT OF MENTALLY ILL PATIENTS

A new synthetic drug known both as myanesin and as tolserol is helping mentally ill patients relax and sleep normally.

Myanesin promises to be a valuable aid to other methods of treatment of some mentally ill patients and is useful in preventing breathing disturbance from electric shock treatment, according to a report on the use of the drug on patients at the Manteno State Hospital, Manteno, Ill.

Writing in the June 25 Journal of the American Medical Association, Louis S. Schlan, M. D., of the hospital, and Klaus R. Unna, M. D., of the Department of Pharmacology, University of Illinois College of Medicine, Chicago, say that beneficial results were obtained from myanesin treatment of patients suffering from anxiety.

Of the group of 63 patients who received the drug, all had been under observation for a long time and many had been treated with electric shock, insulin shock, and carbon dioxide.

Myanesin was given four times daily in tablet and liquid form. Paraldehyde and other drugs used to calm disturbed patients act by putting them to sleep, but myanesin relieves tension without causing drowsiness, the doctors point out.

In two patients, myanesin alleviated anxiety in one hour after it was administered. These patients said that they were able to "think things through" during the time of action of the drug, and both were able to fall asleep normally at bedtime.

In another patient, who had been hospitalized 20 years, myanesin produced alleviation of symptoms of psychoneurosis (less severe mental illness) for 12 days, comparable to results from four electric shock treatments.

Two hypomanic patients, suffering from mental disorder characterized by elation, hyperirritability, and overtalkativeness, became more calm promptly after administration of the drug, and another extremely overactive patient who had been refractory

to all other medication became consistently quiet with myanesin treatment.

In 17 patients with schizophrenia, the severe mental illness popularly referred to as "split personality," the drug had some sedative action in quiet surroundings but no remarkable effects.

In 10 of 30 patients with diverse conditions, breathing disturbance from electric shock treatment, which has been blamed for damage to the brain, was eliminated.

Myanesin alleviated symptoms of eight patients with acute alcoholism and of two patients addicted to morphine and heroin. Myanesin did not affect the craving for the drugs, however.

No serious toxic effects from myanesin were observed by the doctors.

HYPNOTISM FOR ENTERTAINMENT IS DANGEROUS PERFORMANCE

Hypnotism is not an innocuous performance to be used for entertainment, warns a medical consultant of The Journal of the American Medical Association.

"Hypnosis should not be allowed outside of the medical profession, and laws are needed, forbidding the use of hypnosis for entertainment purposes," he advises in the June 25 issue.

"A public performance has the probability of doing great damage. Neurotic symptoms can be created readily by direct suggestion in the average adult. But since children are more suggestible than adults, the potential harm is even greater.

"In competent hands hypnosis has no harmful effects, but where it is utilized for nonsensical and dramatic effects, and where removal of symptoms is attempted without some understanding of the dynamics of the subject's personality, hypnotized persons may be adversely influenced.

"Since many youngsters have a sense of insecurity and are therefore potentially neurotic, they have more serious problems in interpersonal relationships. When they are exposed to an injudiciously applied hypnotic trance, they may become acutely upset."



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Miscellany

USEFULNESS OF CONTACT LENSES IS LIMITED, DOCTOR SAYS

Contact lenses will not take the place of spectacles in most cases in which ordinary eye glasses give serviceable vision, according to Conrad Berens, M. D., New York, member of the American Committee on Optics and Visual Physiology.

This committee is composed of ophthalmologists from the Section on Ophthalmology of the American Medical Association, the American Ophthalmological Society, the American Academy of Ophthalmology and Otolaryngology, and the Association for Research in Ophthalmology.

Writing in a recent issue of the Journal of the American Medical Association, Dr. Berens says:

"During the last few years considerable progress in the manufacturing and fitting of contact lenses has taken place in the United States. Not only are contact lenses now used for conditions which spectacle lenses will not correct, but many persons wear these lenses for cosmetic reasons, as well as for safety in certain sports and occupations.

"Despite the recent avalanche of commercial advertising, contact lenses will not take the place of spectacles in most cases in which ordinary eye glasses give serviceable vision. In these cases contact lenses may be a useful adjunct to spectacles, but they do not enable most persons to discard their glasses completely.

"The largest group of aspiring contact lens wearers are those who have a psychologic aversion to wearing spectacles. For such persons contact lenses may be a great boon. However, the public should not be oversold on the use of contact lenses. Some manufacturers of contact lenses have misused the public vanity through advertising unwarranted claims for their products and their services."

Dr. Berens bases his conclusions on an investigation of contact lenses conducted by the American Committee on Optics and Visual Physiology in which certified specialists of the American Board of Ophthalmology were queried on their experience concerning results in the fitting of contact lenses.



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Among complaints concerning the lenses most frequently mentioned by the 575 physicians who replied were the limited time that most patients can tolerate wearing the lenses, clouding of the solution used in wearing the lenses, and that the lenses are too expensive and many patients discard them.

The committee recommends that the prescribing and fitting of contact lenses by technicians not properly licensed under state or national laws should be prohibited, according to Dr. Berens.

Cases of eye injuries, eye ulcers, and loss of an eye from clumsy technique in fitting the lenses have been reported, he points out.

EVALUATE RESULTS OF SURGERY FOR HIGH BLOOD PRESSURE

A study of 100 patients who underwent sympathectomy for high blood pressure shows that five years after the operation results were favorable in only about 20 per cent, according to Kenneth A. Evelyn, M. D., and Stewart R. Cooper, M. D., Montreal, Canada, and Fred Alexander, M. D., Boston.

In this surgery, nerves of the sympathetic nervous system, which control the organs

that function unconsciously and which may produce involuntary constriction of the blood vessels and other effects, are cut.

The doctors report on their study, made at the Massachusetts General Hospital, Boston, in the June 18 Journal of the American Medical Association.

Five years after the operation, blood pressure was reduced to normal in 8 per cent of the patients, and significant reductions, although not to normal, were noted in an additional 13 per cent, the doctors say.

Results in the remaining 79 per cent were unfavorable. In 52 per cent of the group, blood pressures were not significantly lower than the preoperative levels, and 27 per cent of the patients were dead.

"Comparison of these results with those at the end of a two year followup shows that the results of sympathectomy tend to become less favorable as the length of the followup period increases," the doctors report, adding:

"However, it seems certain that the results of sympathectomy in the most favorable cases are valuable enough to justify continued interest in methods which will im-

prove the selection of cases and in the development of techniques which will increase the effectiveness of the operation."

TREAT LEUKEMIA WITH RADIOACTIVE PHOSPHOROUS

Encouraging results in treating one form of leukemia, or cancer of the blood-forming tissues, with radioactive phosphorus are reported by three doctors on the basis of studies made at the Radiation Laboratory and Divisions of Medical Physics and Radiology, University of California, Berkeley and San Francisco.

Writing in a recent issue of the Journal of the American Medical Association, the doctors—John H. Lawrence, Berkeley, B. V. A. Low-Beer, San Francisco, and James W. J. Carpender, Chicago—say that out of 100 patients treated for chronic lymphatic leukemia with radioactive phosphorus and x-rays, one third were alive five years after the onset of the disease.

"When compared with five year end results in other types of cancer, these results are relatively good," the doctors point out.

This type of leukemia is one of the major forms of the disease, although not the most common. It may develop over a period as long as two years, in contrast to the terrible rapidity with which acute leukemia progresses.

ointment GIVES RELIEF FROM PAIN OF BEE STINGS

Thephorin, a drug which counteracts the effects of chemicals released from body tissues during allergic reactions, gives almost immediate relief from the pain of bee stings and ant bites, according to a report in the June 18 Journal of the American Medical Association.

In eight cases in which an ointment of the drug has been used for these stings and bites, the patients obtained relief in one or two minutes, says William Theodore Strauss, M. D., Upper Montclair, N. J.

QUESTION VALUE OF RICE DIET FOR SEVERE HIGH BLOOD PRESSURE

Restriction of table salt by the rice diet or other diets does not appear to be of much benefit in treating patients with advanced high blood pressure, a study made by doctors from Washington University School of Medicine, St. Louis, shows.

"Restriction of sodium chloride in the diet, either by the rice diet or other means, is usually ineffective when the condition is advanced," Henry A. Schroeder, M. D., Melvin L. Goldman, M. D., Palmer H. Futcher, M. D., and Marlene Hunter, B. S., of the Department of Internal Medicine of the school and Barnes Hospital report in a recent issue of the Journal of the American Medical Association.

Of 16 patients treated by the doctors for high blood pressure, response to the rice diet or other low salt diet was poor in 13, most of whom were suffering from the disease in its severer stages. Three patients with milder forms of the disease were benefited.

As a possible explanation of the beneficial effects of the diet in some cases of high blood pressure, the authors say that patients may have a condition of which high blood pressure is only one symptom.

Six other patients, all obese and all having symptoms suggestive of an alteration in some of the functions of the adrenal cortex were treated by the doctors for high blood pressure. All were benefited by a low salt diet.

CONTACT WITH CHEMICALS MAY CAUSE SKIN DISEASE

Contact with certain chemicals and plants is one of the most common causes of skin disease, according to two dermatologists from Southwestern Medical College, Dallas, Texas.

Workers who are exposed to these substances may develop dermatitis, say Everett C. Fox, M. D., and Thomas L. Shields, M. D., in the July 2 Journal of the American Medical Association.

Among the most frequent causes of occupational skin disorders are acids and alkalis, including cement; petroleum products—oils, greases, and tar; turpentine, alcohol, and other solvents; paints, varnishes, and lacquers; rubber and rubber compounds; dyes; insecticides, including DDT; soaps; antiseptics; perfumes, and photographic chemicals.

Contact with plants, too, is one of the common causes of skin trouble among workers. Primrose, ivy, hemp, dandelion, daisy, ragweed, cocklebur, mahogany, and mesquite wood are frequent offenders in susceptible persons.

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BACKGROUND

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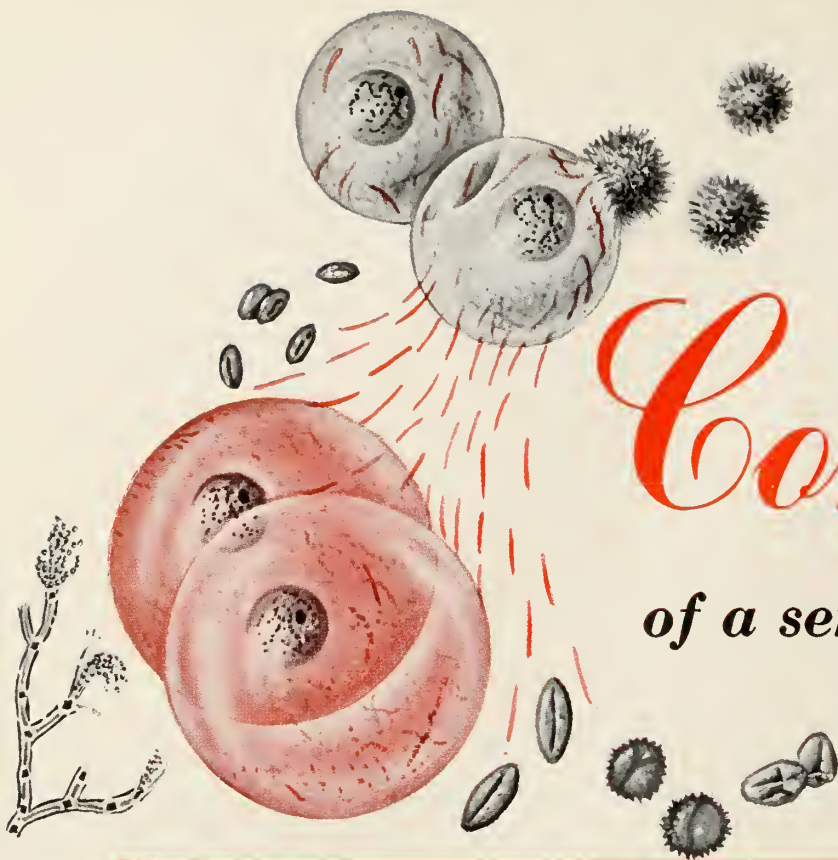
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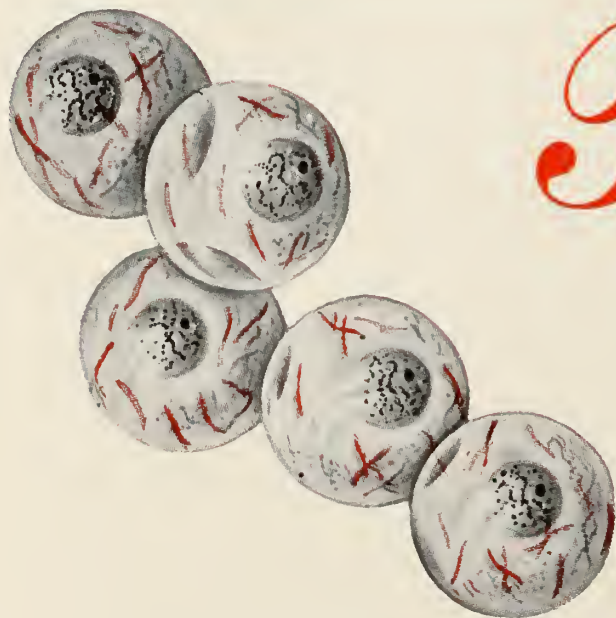


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No. 2

AN EASY WAY TO TREAT DIABETIC PATIENTS

ERNEST H. PLANCK, M. D.

Anniston, Alabama

Ten years of general practice, the first six of which were spent in a small rural community, have impressed upon me the fact that many physicians avoid treating diabetics because they believe that special training and equipment are necessary to do a good job. This belief has been fostered by the great volume of extremely complicated scientific literature which has been published on the subject of diabetes mellitus. It is the purpose of this paper to present a simple, uncomplicated method of diagnosis and treatment of diabetes which can be used with equal ease and confidence by the rural or urban general practitioner.

It is not necessary for blood sugar or glucose tolerance determinations to be made in order to make a diagnosis. Urine analysis will serve the purpose just as well and almost as accurately. The presence of sugar alone in the urine consistently for two or three days, with or without associated polydipsia, polyuria, loss of weight, weakness and craving for carbohydrate foods is proof enough of a mild to moderately severe case. The presence of acetone as well as sugar in the urine indicates a severe case of diabetes mellitus and, when found together, only the one specimen of urine is necessary to confirm the diagnosis.

At the present time there are two small, very compact kits available for the quantitative determination of sugar in the urine. They are: 1. The Sheftel Test Case prepared

by Eli Lilly and Company^{1, 2, 3, 4, 5} and 2. The Clinitest Kit made by Ames Company, Inc.,⁶ Elkhart, Indiana. Both of these kits provide a rapid and extremely simple means of determining the amount of glucose in the urine and can be used easily by anyone without previous training. They are both accurate to about 0.1 per cent, and can be carried in the pocket and used in the home or office. The Denver Chemical Manufacturing Company, New York City, produces an equally compact, simple and accurate test for acetone, which can be used in the home or at the office by patient or physician.

Once the diagnosis has been made, and here let me again emphasize the fact that although blood sugar and glucose tolerance determinations give valuable information about each case they are not essential to diagnosis, it becomes necessary to select the proper diet and insulin dosage for the patient, if it is necessary to give insulin. It is

1. Sheftel, A. G.: A Combined Qualitative and Quantitative Test for Sugar in the Urine, M. J. & Rec. 126: 663, 1927.

2. Maclean, H.: Observations on Fehling's Test for Dextrose in Urine, Biochem. J. 1: 111, 1906.

3. Peters, J. P., and Van Slyke, D. D.: Quantitative Clinical Chemistry, Williams and Wilkins Company, Baltimore 2: 446, 1932.

4. Benedict, S. R.: The Detection and Estimation of Glucose in Urine, J. A. M. A. 57: 1193, 1911.

5. Rhodhamel, R. H., et al.: A Rapid Method of Estimating Urine Sugar, M. Rec. 145: 324, 1937.

6. Queries and Minor Notes: Clinitest Tablets, J. A. M. A. 137: 329, 1948.

Read before the Association in annual session, Montgomery, April 19, 1949.

at this point that most physicians begin to doubt their ability to carry out proper treatment, but the solution to this problem is really very simple.

As a starting point, place the patient on a restricted diet consisting of protein 80 grams, carbohydrate 150 grams and fat 75 grams, divided into one-fifth the total allowance for breakfast and two-fifths the total allowance for noon and evening meals. This diet will then provide 1595 calories on the basis of 4 calories per gram of protein and carbohydrate and 9 calories per gram of fat. Eli Lilly and Company will furnish on request a booklet entitled "Diet Prescription for the Diabetic" which contains a complete list of all commonly used foods and the number of grams of protein, carbohydrate and fat in each food in terms of household measures. Daily menus can be easily prepared with the help of this booklet either by the physician or by the patient himself.

After the patient has been on the restricted diet for three to four days, the next step is to find out how well he has been able to utilize this diet and, having obtained this information, to decide what his permanent dietary requirement will be. This can best be done by obtaining a daily 24-hour specimen of urine. The patient is instructed to begin the collection of the 24-hour specimen at a certain time each morning, which usually conforms to the hour at which he arises, seven o'clock for instance. To begin collection, the patient empties his bladder on the first morning at seven o'clock and discards that urine since it represents urine collected in the bladder before the beginning of the 24-hour period. Thereafter, all urine voided during the day and night until seven o'clock the next morning is saved and placed in one large, thoroughly clean container. Then, at seven o'clock on the second morning, the patient voids and adds this urine to that already collected in the container, since it is urine excreted during the 24-hour period to be tested. The collection of the 24-hour specimen can be continued from day to day in this manner and without interruption. The patient must be cautioned to void promptly at the specified time for beginning and ending the specimen and he must also be instructed to void just before defecation in order to avoid any involuntary loss of urine at this time. A little time and patience

spent in explaining the objective to your patient will prevent any mishap in collection.

After the specimen has been obtained, the entire amount can be brought in to your office where it is accurately measured in terms of cubic centimeters and then tested quantitatively for the percentage of sugar. If the test for sugar is negative, then all the carbohydrate allowed in the diet has been utilized by the body and this particular patient does not need insulin on this diet. If sugar is present, multiply the number of cubic centimeters of urine voided during the 24-hour period by the per cent of sugar expressed in decimals and the result will be the number of grams of carbohydrate spilled over or not utilized by the body. (For example: 1000 cc. of urine times 0.01 (1%) per cent sugar equals 10 grams of carbohydrate spilled over, or, 1270 cc. of urine times 0.0025 ($\frac{1}{4}\%$) per cent sugar equals 3.17 grams of carbohydrate spilled.)

Having determined what your patient can do in the way of utilizing an arbitrarily selected diet, you must then give him sufficient food to perform his usual daily activities and enough insulin to insure the proper utilization of this food within the body, if it is found that insulin is needed. Starvation to control diabetes is by no means necessary or wise; on the other hand, it is surprising to find how few people will need more than 2000 calories per day to perform their daily tasks when this amount is divided into the proper proportions of protein, carbohydrate and fat. From any accepted table select the optimum weight for the patient's age, height and sex. The attainment of this weight should be the next objective.

Ordinarily, it is safer and easier to effect weight changes in a diabetic by varying the amount of the protein allotment. If the patient is underweight, as most diabetics of long standing are, an allowance of $1\frac{1}{2}$ to 2 grams of protein for every 2.2 pounds of the desired optimum weight will cause a gradual gain to the selected weight; and when that is reached, $1\frac{1}{2}$ grams of protein for every 2.2 pounds will usually maintain the weight at this level. An allotment of 1 gram or less of protein for every 2.2 pounds of the optimum weight will usually bring about a gradual reduction in obese persons; and when the desired weight is reached, the allotment is

changed to $1\frac{1}{2}$ grams for every 2.2 pounds of the weight that is to be maintained.

I have never yet found any formula in the literature that would accurately predict the caloric requirement needed for doing the many different types of work encountered in the lives of your patients. Each individual varies and must be treated accordingly. In my own practice I have adopted a set of standards that seem to work out very well, as follows: 1200 calories as basal requirement with the patient spending most of the day in bed; 1600 calories for moderate activity up and around the house; 1800 calories for the patient doing office or clerical work; 2000 calories for moderate manual labor, as driving a milk delivery truck; 2300 calories for heavy manual labor as encountered by a foundry worker; and higher allotments for heavier exertion if and when needed.

The direct application of the foregoing general information to each patient should follow these successive steps: 1. Find out what the patient can utilize of the arbitrarily selected diet; 2. Select the optimum weight and from that determine the protein ration to be given; 3. Classify your patient according to the number of calories that will probably be needed; 4. Subtract the number of calories given in the protein allowance (4 calories per gram) from the total caloric allowance; 5. Divide the remaining calories so that there are approximately 2 grams of carbohydrate given (4 calories per gram) for every gram of fat (9 calories per gram) allowed.

In the case of the patient who does not spill over any sugar in the 24-hour specimen either on the arbitrarily selected starting diet or on the final diet adjusted to his optimum weight and daily caloric requirement, obviously no insulin is needed and this patient may be considered to be "balanced" to all practical purposes. In the case of the patient who spills sugar on either or both the starting diet and the final adjusted diet, insulin is needed. The dose of insulin is determined from the amount of sugar being spilled in the 24-hour specimen, one-half unit of insulin being given for every one gram of sugar spilled, until the patient is spilling over not less than one gram of sugar daily and not more than ten grams. If the urine becomes entirely sugar free, then the patient is in danger of having an insulin re-

action and the insulin should be reduced by two units daily until some sugar is being spilled over again. If the patient is spilling between one and ten grams of sugar, there is no danger of insulin reaction, the fasting blood sugar will be found to range between 140 and 150 milligrams per cent, which is not too high for the average case, and the patient will feel better. It is an accepted fact that diabetics are considered regulated when they do not spill more than five per cent of the total carbohydrate available in the diet, as figured from the carbohydrate given, plus ten per cent of the fat and fifty-eight per cent of the protein given, which is eventually converted into carbohydrate in the body. This requirement is complied with when the patient is not allowed to spill more than ten grams and not less than one gram of sugar in the 24-hour specimen. When these requirements have been met and the urine is also free of acetone, the patient is well regulated. The presence of acetone in the urine after diet and insulin dosage and urinary sugar have been satisfactorily regulated for several days indicates that ketosis is present and calls for more specific investigation.

The type of insulin to be used is a matter to be decided by the physician according to his preference, but the dose of insulin is the same regardless of whether protamine zinc, regular or globin insulin or any combinations thereof are used. I have found it much more satisfactory, especially from the standpoint of the patient, to use protamine zinc insulin since only one daily injection is required about forty-five minutes before the first meal of the day. There has been considerable controversy in regard to the maximum safe dosage of protamine zinc insulin as well as to its effectiveness. I have used up to one hundred units per day in a number of cases without encountering any difficulty, but there are a certain number of individuals who will develop sensitivity to the zinc in the preparation and can not tolerate this type insulin for that reason. There have been only four or five cases encountered in which I had reason to believe that insulin effect was lost in doses ranging above seventy-five units per day. When using regular insulin, the dose is usually divided into one-fifth before breakfast and two-fifths before dinner and supper. When globin insulin

which gives an eight hour effect is used, it is best divided into two-fifths the total dose before breakfast, two-fifths eight hours later in mid-afternoon and one-fifth just before midnight. It is well to remember that protamine zinc insulin frequently exhibits a cumulative effect in that the dose may have to be reduced below that originally estimated to be necessary for the case in question, or, as some authorities believe, this effect may simply be due to an improvement in the function of the islands of Langerhans under diet and treatment. This so-called cumulative effect will also be noticed occasionally when regular or globin insulin is being used.

In addition to the proper diet and dose of insulin, it is also advisable to give the minimum daily requirement of all the vitamins in pill form to prevent any deficiencies from developing.

Once the patient has been regulated satisfactorily, it is usually sufficient to have him

bring in a 24-hour specimen of urine for testing about every two weeks. If the patient is intelligent, he can very easily be taught to collect, measure accurately and test the 24-hour specimen for sugar and acetone at his home and telephone you the results for your observation and further instruction.

The suggested method of diagnosis and treatment advanced in this paper is the result of observations obtained from the active treatment of slightly more than one hundred diabetic patients by this method during the past ten years. However, the writer wishes to be the first to point out that this method is suitable for use only in the average uncomplicated case of diabetes in the adult, the child, or in pregnant women, but can not be depended upon to handle satisfactorily the many complications, such as coma, gangrene, high renal threshold to sugar and others.

RHEUMATOID SPONDYLITIS

J. O. FINNEY, M. D.

Gadsden, Alabama

SYNONYMS

Rheumatoid spondylitis is a commonly encountered cause of back pain chiefly affecting young adult males; no age group is exempt and the disease may occur in females. The symptomatology and clinical and roentgenographic findings are perfectly clear cut, yet many cases are either undiagnosed or incorrectly diagnosed for years.¹ In a great number of cases recognition is delayed until disability is irreversible.²

The frequency with which rheumatoid spondylitis, a potentially disabling disease, is overlooked is sufficient justification for the brief presentation of criteria requisite for early recognition and an outline of an effective therapeutic program.

Read before the Association in annual session, Montgomery, April 19, 1949.

1. Herrick, W. W., and Tyson, T. L.: The Medical Aspect of Ankylosing Spondylitis (Marie-Strumpell), *Ann. Int. Med.* 15: 994-1001 (Dec.) 1941.

2. Boland, E. W.: Rheumatoid Spondylitis: Its General Features and Management, *California Med.* 65: 285-292 (Dec.) 1946.

In past years this type of spondylitis has been referred to in the literature variously as: Marie-Strumpell's disease, von Bechterew's disease, spondylitis ossificans ligamentosa, spondylitis ankylopoietica, juvenile spondylitis and ankylosing spondylitis. The majority of these designations refer to the involvement of a certain segment of the spine, the age group of the patient, or to ligamentous calcification. Earlier, the disease pattern was not visualized in its entirety. With the gradual development of the clinical and pathological concept to the present day, the term rheumatoid spondylitis, as adopted by the American Rheumatism Association, is the preferable designation. This term envisions a single clinical and pathological entity regardless of the spinal segments involved or the stage of advance of the disease.

PATHOLOGY

Rheumatoid spondylitis is a chronic inflammatory disease which involves the

sacroiliac joints and the synovial joints and adjacent soft tissues of the spine. Late in the course of the disease the shoulders and hips may be affected. Initial manifestations occur in the sacroiliac joints, whence the process is progressive in a caudad direction.

Pathologically, the joint changes are characterized by synovitis, chondritis, juxta-articular osteitis and, finally, ankylosis. Calcific deposits appear in the longitudinal spinal ligaments resulting in the so-called "bamboo spine."

The pathological alterations in this type of spondylitis generally are conceded to be comparable in all essential respects to those observed in rheumatoid arthritis of the peripheral joints.^{3, 4, 5} Rheumatoid arthritis of peripheral joints co-exists in from 18 to 25 per cent of the cases of rheumatoid spondylitis.²

The cause of rheumatoid arthritis of peripheral joints and rheumatoid spondylitis is unknown.

INCIDENCE

The true incidence of rheumatoid spondylitis is estimated to be something less than 0.1 per cent.³ However, incidence of the disease rises sharply when one is concerned with a group of young adult males with complaints referable to the back. Among a group of young adult soldiers admitted for back complaints to an Army General Hospital in World War II, 18 per cent were found to have rheumatoid spondylitis.⁵

Approximately 90 per cent of all cases of rheumatoid spondylitis occur in male patients.^{1, 4, 6} In one series of cases of this disease reported on, no female patient was encountered.³ Within the past few years an incidence among female patients distinctly

higher than that generally reported has been recorded by two independent observers.^{7, 8} In peripheral rheumatoid arthritis the sex incidence favors females 3:1.²

CLINICAL FEATURES

SYMPTOMATOLOGY

Rheumatoid spondylitis is a progressive disease in which periods of activity alternate with periods of partial (sometimes complete) remission of symptoms. The respective periods of remission and relapse are unpredictable and variable in duration. Systemic symptoms of fever, lassitude, malaise, weakness, anorexia and weight loss commonly occur in active periods of the disease and clear away in remissions. After a period of from 3² to 25⁹ years (average 10 years⁴), the process becomes permanently inactive and the spine is fixed in the posture allowed to develop in the intermittent periods of activity of the disease.

The onset of symptoms in rheumatoid spondylitis is usually insidious. Mild to moderately severe aching, soreness and stiffness of the lower back generally indicate onset of the disease. These "fibrositic" symptoms characteristically are more pronounced after periods of sleep and are accentuated by periods of sitting, lying, damp weather and violent physical exertion. They are temporarily ameliorated by mild exercise and the use of heat and salicylates. Aching, soreness and stiffness across the lower back are considered to be caused by sacroiliac joint involvement.

In addition to the true "fibrositic" pattern described, sharp, catchy pains across the lower back and over both buttocks occur fairly frequently. In some cases, approximately 10 per cent,² pain over one or both sciatic nerve distributions may signal onset of the disease. The "sciatica" of rheumatoid spondylitis is of relatively short duration, frequently shifts from side to side or is bilateral, rarely extends below the knee, and is unassociated with clinically demonstrable

3. Dunham, C. L., and Kautz, F. G.: Spondylarthritis Ankylopoietica: Review and Report of Twenty Cases, *Am. J. M. Sc.* 201: 232-250 (Feb.) 1941.

4. Hench, P. S.; Slocumb, C. H., and Polley, H. F.: Rheumatoid Spondylitis: Questions and Answers, *M. Clin. North America* 31: 879-906 (July) 1947.

5. Boland, E. W., and Present, A. J.: Rheumatoid Spondylitis; A Study of One Hundred Cases, With Special Reference to Diagnostic Criteria, *J. A. M. A.* 129: 843-849 (Nov. 24) 1945.

6. Hare, H. F.: The Diagnosis of Marie-Strumpell Arthritis with Certain Aspects of Treatment, *New England J. Med.* 223: 702-705 (Oct. 31) 1940.

7. Fletcher, E.: Ankylosing Spondylitis, *Lancet* 1: 754-756 (June 10) 1944.

8. Query, R. Z.: Rheumatoid Spondylitis; Its Early Diagnostic Features and Management, *J. A. M. A.* 139: 692-698 (Mar. 12) 1949.

9. Boland, E. W., and Shebesta, E. M.: Rheumatoid Spondylitis: Correlation of Clinical and Roentgenographic Features, *Radiology* 47: 551-561 (Dec.) 1946.

neurological changes. The sharp, catchy pain over the lower back and that over the sciatic nerve distribution is a reflection of foraminal narrowing from swelling of the synovial membrane of the lower lumbar apophyseal joints.

In the course of cephalad progression of the disease, pain of radicular origin is not uncommon, and erroneously may be interpreted as visceral in origin by both patient and physician. When the costovertebral articulations become involved, sharp chest pain occurs on deep inspiration, coughing, sneezing and straining. Symptoms referable to the lower back may be quite mild and noticed only for a brief period after arising from sleep. Patients often delay visiting a physician until chest wall pain incites fear of "pleurisy" or "lung trouble."

The first symptom of involvement of the apophyseal joints at the cervical level is limited deviation of the neck. Later, motions of flexion, extension and rotation become restricted. Limitation of motion, regardless of the spinal level concerned, may result from apophyseal joint involvement and associated muscle spasm and does not necessarily indicate that the ligaments have become calcified.

Once the disease has become permanently inactive, posture may be so abnormal that total disability results. If, however, good posture is maintained in the intermittent periods of activity the patient may spend his remaining years free from significant symptoms referable to the back.

PHYSICAL FINDINGS

The physical findings on examination of a patient with rheumatoid spondylitis will necessarily depend upon the stage of advance of the disease, as is true in the case of any progressive disorder.

In very early cases the findings are limited to the lower back where there are tenderness to deep percussion over the sacroiliac joints and the lower lumbar vertebrae, pain and slight limitation of motion of the lumbar spine, bilateral (although not necessarily equal) limitation of straight leg raising, and paravertebral muscle spasm.

With further progress of the disease, findings referable to the lower back are more prominent and, in addition, there is loss of lumbar lordosis, the lumbosacral vertebrae

move as one piece (the spinous processes are seen and felt to be fixed on attempts to flex and extend the back), and there is striking atrophy of the lumbar paravertebral muscles which gives the back an "ironed-out" appearance. At this stage of advance there usually is an oddly stiff gait and posture which are more obvious when the patient sits, rises or picks objects up from the floor.

When the disease has extended to the dorsal level, restricted motion of the chest cage is observed. Chest expansion may be only $\frac{1}{4}$ to 1 inch. Respirations are abdominal in type when there is marked reduction in chest expansion. A profile view of the patient with sacroiliac joint, lumbosacral and dorsal level involvement is fairly characteristic: There is straightening of the lumbar segment of the spine with smoothing out of the corresponding back muscles, a slight stoop forward from the hips, flattening of the anterior chest, accentuation of dorsal kyphos, and the abdomen is full and sags at the umbilical level and below.

The first sign of involvement of the apophyseal joints at the cervical level is limitations of deviation of the head. This is easily tested by requesting the patient to attempt to place an ear against the shoulder of the corresponding side. Evidence of spondylitis at the neck level is made quickly apparent by the limitation of motion exhibited in this simple maneuver. Later, protrusion of the head occurs. Finally, there is general restriction of neck motion with the exception of that of the atlas and axis, which remains unaffected.

When rheumatoid spondylitis has become permanently inactive, the physical appearance of the patient will depend upon the attention which has been given to maintenance of proper posture in the intermittent periods of activity. If breathing and postural exercises have been diligently performed, there may be little discernible difference aside from the presence of a fairly straight, immobile back. If the patient has not received proper instruction in the exercises or has been derelict in the execution of the procedures, he may exhibit one of many grotesque and disabling deformities when the disease has run its course. A sight familiar to all physicians is that of the patient with such marked flexion deformity of the spine that the lower rib margins are fixed

near the iliac crests. When these helpless people are seen, their appearance should incite in us feelings of professional failure and humiliation.

LABORATORY FEATURES

The only laboratory procedure of diagnostic aid in rheumatoid spondylitis in the determination of the erythrocyte sedimentation rate. Significant elevation occurs in approximately 80 per cent of the cases.⁵ The sedimentation rate may be normal consistently in certain cases which clinically are quite active. Mild secondary anemia is found in approximately 30 per cent of the cases.⁵

Examination of the spinal fluid in cases of this disease reveals normal manometric pressure, cell count and sugar concentration and the colloidal gold curve is flat.¹⁰ In approximately 40 per cent of the cases the protein is elevated, with values ranging between 45 and 105 mg. per 100 cc. of spinal fluid.¹¹ An increase in the level of the spinal fluid protein is of little or no diagnostic value. The increase is apparently related to the severity of the disease and not to the duration or extent of involvement.¹¹

ROENTGENOLOGIC FEATURES

Radiographic evidence of rheumatoid spondylitis may be apparent in the sacroiliac joints, the apophyseal joints, the longitudinal spinal ligaments, and, in late cases, in the hip and shoulder joints. The intervertebral disks are not affected and the vertebral bodies only show nonspecific (disuse) demineralization.

The sacroiliac joints almost never fail to become involved in rheumatoid spondylitis⁴ and in practically all of the cases are the first site of x-ray evidence of the disease. The findings are usually bilateral, although they may be confined to one side for a variable period of time. Evident first is blurring of the caudad one-third of the joints, a re-

sult of demineralization and sclerosis of subchondral bone. Later, a serrated and irregularly mottled appearance is spread more extensively over the juxta-articular subcortical zones of the ilium and sacrum. With further progression there is ossification of trabeculae between the ilium and sacrum. When the disease is totally inactive in the sacroiliac joints, there is complete ankylosis and the previous joint site is represented by a thin line of increased density.

Roentgenographic changes in the apophyseal joints usually are not demonstrable, chiefly for technical reasons, in other than the lumbar segment. Even here oblique views are required for clear exposition. The radiographic changes in these joints are essentially those described as occurring in the sacroiliac joints. Loss of the lordotic curve normally present at the lumbar and cervical levels may be the only radiographic evidence of rheumatoid spondylitis, with the exception of changes in the sacroiliac joints.

Calcification of the spinal ligaments is initially demonstrable as fine, interrupted streaks of increased density. There is gradual (although sometimes surprisingly rapid) increase in this process of ligamentous calcification and ossification. Terminally, coalescence of the ligaments forms the universally recognized radiographic picture of the "bamboo spine."

TREATMENT

There is no specific therapeutic measure against rheumatoid spondylitis. However, the employment of a systematic program, which combines the use of deep x-ray irradiation, physical therapy and salicylates, accomplishes much toward relief of symptoms and the prevention of spinal deformity. Complete arrest of the progress of the disease may result from properly executed therapy.¹²

GENERAL MEASURES

Full attention must be given to the general status of the patient. In the instance of associated malnutrition, a high caloric, high vitamin diet is to be prescribed. Conversely, if the patient is obese, a reduction program is to be instituted to relieve the back of

10. Ludwig, A. O.; Short, C. L., and Bauer, W.: Rheumatoid Arthritis As a Cause of Increased Cerebrospinal Fluid Protein: A Study of One Hundred and One Patients, *New England J. Med.* 228: 306-310 (Mar. 11) 1943.

11. Boland, E. W.; Headley, N. E., and Hench, P. S.: Increased Protein Content of the Cerebrospinal Fluid in Rheumatoid Spondylitis, *J. Clin. Investigation* 25: 918-922 (Nov.) 1946.

12. Freyberg, R. H.: Roentgen Therapy for Rheumatic Diseases, *M. Clin. North America* 30: 603-615 (May) 1946.

weight burden. Iron salts are indicated if hypochromic anemia is demonstrated.

The patient must be carefully instructed as to regulation of activity and rest. The day should be broken with a rest period of from 30 to 60 minutes after the noon meal, and an absolute minimum of eight hours rest at night is to be insisted upon. Mild to moderate physical activity is to be encouraged but the patient must keep well within the limits of spine tolerance. If the occupation is one requiring arduous use of the back, a change to one less strenuous must be sought. We are concerned with a chronic process and not one from which complete recovery can be anticipated after a few weeks of rest from work.

PHYSIOTHERAPY

Breathing and postural exercises are the most important measures of physiotherapy in cases of rheumatoid spondylitis. The patient must receive proper instruction in the exercises which are to be executed for 5 to 10 minutes four or five times each day. The procedures are entirely uncomplicated and are described in detail in any standard textbook on arthritis.

The use of a hot tub soak or a hot shower for a 10-minute period the first thing in the morning is a useful procedure, particularly for patients whose activities are little altered by the disease. The stiffness and soreness, which generally are most marked on first waking from sleep, rapidly clear away after a tub soak or shower.

The patient should sleep on his back on a firm cotton mattress, beneath which boards have been placed. This prevents sagging of the back and minimizes muscle spasm. A pillow should be avoided but, if the patient objects too strenuously to this privation, a small, flat one may be used. A blanket roll beneath the lumbar segment of the spine will aid in maintenance of the lumbar curve.

The application of infra-red rays over the affected parts for a period between 30 and 45 minutes twice each day is very helpful. This, as well as the other measures already described, may be carried out in the home with little expense and no inconvenience to the patient.

A relatively small number of patients will require back braces, hyperextension frames and plaster shells for the prevention and

correction of deformity if therapy is instituted early in the course of the disease.

DRUGS

Salicylates have a useful place in the therapy of rheumatoid spondylitis. Aspirin in the dose of one gram three or four times daily often allows a patient to be employed regularly, who, without it, would not quite be up to consistent performance. If aspirin is poorly tolerated, sodium salicylate with protective coating may be used in comparable dosage without untoward effect.

Gold salts, currently in wide use for treatment of rheumatoid arthritis of peripheral joints, generally are conceded to be of no therapeutic value in cases of rheumatoid spondylitis.^{13, 14}

There is nothing to indicate that either penicillin or streptomycin, each ineffective against rheumatoid arthritis, is of value in rheumatoid spondylitis.⁴

The use of neostigmine bromide and related substances has been reported to be of value in relieving muscle spasm in cases of rheumatoid arthritis of peripheral joints and of the spine.¹⁵ Rheumatologists generally are agreed that use of these drugs has no place in the management of cases of rheumatoid spondylitis.¹⁶

The intravenous injection of typhoid vaccine for a non-specific foreign protein effect occasionally appears to ameliorate symptoms in active cases of rheumatoid spondylitis. The real value of this agent for actually inducing a remission is questionable.³

ROENTGEN THERAPY

Deep x-ray irradiation is without question a beneficial therapeutic agent against

13. Cecil, R. L.; Krammerer, W. H., and De Prume, F. J.: Gold Salts in the Treatment of Rheumatoid Arthritis: A Study of 245 Cases, *Ann. Int. Med.* 16: 811-827 (May) 1942.

14. Tyson, T. L.: Spondylitis Ankylopoietica, *M. Clin. North America* 21: 1755-1761 (Nov.) 1937.

15. Kabat, H.: Studies on Neuromuscular Dysfunction. 111. Neostigmine Therapy of Chronic Rheumatoid Arthritis and Subacromial Bursitis, *Pub. Health Rep.* 59: 1646-1650 (Dec. 22) 1944.

16. Hench, P. S.: Arthritis, *J. A. M. A.* 132: 974-979 (Dec.) 1946.

spondylitis^{17, 18} but is not a specific one and sole dependence on this measure of therapy is to be depreciated.

In a well controlled study in 1941, Smythe, Freyberg and Lampe¹⁷ treated fifty-two patients who had rheumatoid spondylitis with roentgen therapy. Subjective improvement was apparent in 72 per cent of the cases, and unmistakable objective improvement occurred in 50 per cent. A larger and more detailed study of this character was made recently by Smith and his associates.¹⁸ The results obtained firmly established the value of roentgen therapy in

17. Smythe, C. J.; Freyberg, R. H., and Lampe, I.: Roentgen Therapy for Rheumatoid Arthritis of the Spine (Marie-Strumpell Arthritis; Spondylitis Rhizomelique), J. A. M. A. 117: 826-830 (Sept. 6) 1941.

18. Smith, R. T.; Boland, E. W.; Shebesta, E. M., and Hench, P. S.: The Effect of Roentgen Therapy in Rheumatoid Spondylitis, Proc. Am. Rheumatism A. (In press).

rheumatoid spondylitis. In terms of immediate prognosis the best results are to be expected when deep x-ray therapy is combined with physiotherapy.¹⁸

The dose of roentgen therapy in any given case is to be left to the discretion of the radiologist. Freyberg¹² recommends 140 kv over wide portals with from 100 to 150 r x 3. Especial care must be exercised in therapy of female patients with rheumatoid spondylitis to avoid sterilization.

SUMMARY

The criteria for the diagnosis of rheumatoid spondylitis are briefly presented. A therapeutic program is outlined which, if diligently executed, will induce a remission of the disease and prevent marked spinal deformity in a majority of the cases.

The presentation is made with the hope of stimulating early diagnosis and adequate treatment of a potentially crippling disease.

THE VALUE OF THE UPRIGHT PYELOGRAM

J. ULLMAN REAVES, M. D.

Mobile, Alabama

In the beginning, flat pyelograms were resorted to in order to carry out roentgenographic diagnosis of the urinary tract. This was followed by instrumentation and pyelographic studies in the supine position (Figs. 1A and 1B). Again this procedure was augmented by intravenous pyelograms keeping the patient in supine position all the time. As study progressed in the roentgenographic studies of the upper urinary tract it became evident that other positions were necessary in order to give the information we were seeking. Among these are the oblique position (Fig. 1C), lateral position (Fig. 1D), and the upright position (Fig. 2). This paper has to deal with pyelograms in the upright position, and their advantage in the diagnosis of pathology in the urinary tract, ruling out pathology which had inadvertently been placed in the urinary tract when it existed elsewhere.

The paramount finding in upright pyelograms is the extent of excursion in kidney ptosis (Figs. 3A, 3B, 3C; 4A, 4B, 4C; 5A, 5B

and 5C). Upright pyelograms also rule shadows, which are thought to be in the kidney pelvis, to be in the adjacent structures (Figs. 6A, 6B, 6C and Fig. 7). The clinical aspect of kidney ptosis varies a great deal. Renal symptoms are sometimes overlooked, even by specialists, unless a check-up is made by means of the now available tests at our command. The use of these tests and accurate diagnostic procedures have a great deal to do with the widespread kidney disorders that the clinician finds in his office and in our hospitals. During the past ten years in Europe there has been a marked increase in the incidence of renal ptosis which some authors attribute to food rationing, as well as to the many grievances suffered by the populace during these trying years. The great amount of emaciation, plus the deficiency diseases and the extra amount of physical endurance the people had to suffer, undoubtedly added to their quota.

Clinically the main distinction to be made is between the symptoms that do and those that do not suggest directly an impairment

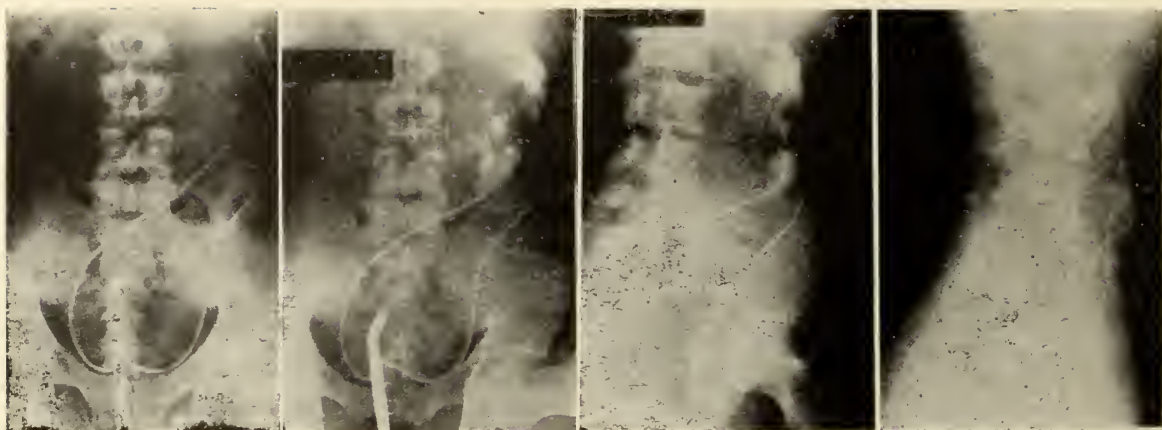


Fig. 1A—S. E., colored male, age 24, combat veteran. Flat K. U. B. in supine position suggests crossed ectopia of right kidney.

Fig. 1B—Same patient. Pyelogram in supine position. The upper kidney shadow is the left kidney and suggests horseshoe kidney as the calyces are pointing to the midline. The lower kidney pelvis is quite distorted, and from a study of this picture we seem to be dealing with crossed ectopia with fusion.

Fig. 1C—Same patient. Pyelogram in the oblique position substantiates the opinion formed by the pyelogram in the supine position (Fig. 1B).

Fig. 1D—Same patient. Lateral pyelogram. Here the lower kidney pelvis is slightly anterior to the upper kidney pelvis shadow, and, to our mind, confirms the opinion that we are dealing with crossed ectopia with fusion. This patient came in with hematuria (painless) four months after discharge from the Army. There was no previous history of urinary tract disorder.

of the urinary tract. Patients in the first group complain of lumbar pains which are mild in rest but become more intense while standing erect, walking and on exertion, especially when the hands are raised above the head, as in hanging clothes, draperies or painting a ceiling. These symptoms are also pronounced when the patient is in a state of fatigue. In some cases, colic of the nephritic type is prominent; in other instances, ureteral or renal pains point to hydronephrosis as a complication of the ptosed condition.

The second group covers a variety of symptoms seemingly unrelated to renal disorders. These obscure pains are usually traced to the gallbladder, liver, appendix or genitalia. Reflex phenomena are frequent, especially gastric disorders or pains in the kidney opposite to the one actually affected. In some cases, the complaints are limited to extreme fatigue and inability to carry on any physical activity. Sometimes hysteria is the only symptom, though the condition has been verified as renal ptosis. As a rule, surgery brings no improvement, if a wrong diagnosis has been made. Two guiding



Fig. 2—Mrs. K. B., age 47. Flat K. U. B. in upright position. When we have one anomaly, we can look for others. Here we have six lumbar vertebrae and a bifurcation of the left ureter with two distinct kidney pelves.

principles are at our command to interpret recorded observations properly, namely:

1. The characteristic reductability of a ptosed kidney as a basis for diagnosis. Where there are no lesions fixing the kidney in the abnormal position—that is to say, in some cases—the affected kidney will shift back to normal as the body reclines or is in a Trendelenburg position.

2. Clinical evidence alone is inconclusive and should be supplemented by routine pyelographic study, which must be standardized and specific.

Examination in the supine position fails, as a rule, because the kidney is in a normal position. This difficulty is not necessarily eliminated in the erect stand. Quite often, despite an advanced acute emaciation, the



Fig. 3A—Mrs. R. O. D., age 37. Flat K. U. B., with ureteral catheters in place.

Fig. 3B—Same patient. Pyelogram in supine position.

Fig. 3C—Same patient. Upright pyelogram. Note excursion and rotation of right kidney, and excursion of left kidney with irregular outline of ptosed ureter.



Fig. 4A—Mrs. B. G., age 36. Flat K. U. B., with ureteral catheters in place.

Fig. 4B—Same patient. Pyelograms in supine position.

Fig. 4C—Same patient. Upright pyelogram. Note excursion of right kidney with rotation on its pedicle and angulation of ureter at fourth lumbar vertebra.

abdominal wall retains its muscle tone so that the ptosis is not apparent, even where the kidney has descended as low as the true

pelvis. In patients with an atonic abdominal wall, or where there is an interposing bulk of the intestines, the true ptosis cannot be as-



Fig. 5A—Mrs. C. E. B., age 52. Flat K. U. B. with ureteral catheters in place.



Fig. 5B—Same patient. Pyelogram in supine position.



Fig. 5C—Same patient. Upright pyelogram. Note marked excursion and rotation of right kidney, and excursion with kinking of ureter on left side.



Fig. 6A—Mrs. D. D. H., age 52. Flat K. U. B. with ureteral catheters in place. Note shadow which is presumed to be a kidney calculus, as patient gave a history of hematuria with pyuria intermittently for some months.



Fig. 6B—Same patient. Pyelogram in supine position. This shows the calculus in Fig. 6A to be superimposed on or adjacent to the media in the right kidney pelvis. A left hydro-ureter, with pyelectasis of the left kidney pelvis.



Fig. 6C—Same patient. Upright pyelogram. The margin of the liver and the calculi shadow descend. Diagnosis of right side: kidney pyelogram normal. Visceroptosis of liver with numerous calculi in the gallbladder, evidenced by the rough outline of the calculi shadow. Left side: Ptosis of kidney with hydro-ureter and angulation of upper portion. Constriction at utero-pelvic junction.

certained. Some clinicians have great dexterity in palpating the kidney bimanually and making an accurate diagnosis, having acquired an indispensable skill in knowing when the kidney is palpated, and feeling its movement up or down. In the light of my experience I have been unable to master such dexterity and skill relying on accurate roentgenology, with upright pyelograms and pyelograms in the Trendelenburg position, together with lateral and oblique ones when necessary.

Since most pyelograms are made with the patient in the recumbent position, the ptosis may remain undisclosed for the reasons stated above. Pyelography, both retrograde and intravenous, must be done not alone on the reclining patient but also in the erect

position. We first make a flat K. U. B., with catheters in place, in the supine position, and follow this by a double pyelogram so as to have one to compare with the other. Then the patient is placed in the upright position, the kidney pelvis reinjected, catheters removed, and another exposure made. Naturally this does not always disclose the amount of descent the kidney has made, nor does it disclose how much the kidney has rotated on its pedicle, as these vary according to the activity of the patient in the upright position; and we have them in the upright position without activity. We supplement the pyelographic data thus obtained with any oblique, lateral or Trendelenburg position we think necessary, since we do our urological survey with the patient on a urological table where these positions can be obtained without moving the patient.

In passing the ureteral catheter, sometimes it goes up with ease, and then again we meet obstacles, so to speak. A favorite location is after two-thirds of the route from the vesical to the kidney pelvis has been traversed. By turning the catheter slightly the obstruction seems to melt away and is easily by-passed. Especially is this so if the catheter has a filiform or olivary tip. When this catheter obstruction is met, and then subsides with manipulating the catheter, we do not believe that the resistance is due to a stricture, to renal calculi, or to a true spasm of the ureter, but that an angle in the ureter (Fig. 2C) caused by the ptosis has been straightened out by the gentle pressure and manipulation of the ureteral catheter. At a junction between the upper third and the lower two-thirds of the ureter is a point which remains fixed, and around which the kidney, as well as the upper third of the ureter, rotates when ptosis is present. From this it follows that in such ureters there is a portion bent at an acute angle which gives resistance to the passage of the ureteral catheter, as all urologists are familiar with in catheter exploration. Curvature is rectified by manipulating the catheter and the catheter ascends. In our hands, whenever we have observed this phenomenon, upright pyelograms confirm the tentative view and diagnosis of renal ptosis.

In ureteral catheter manipulation, resistance due to calculus, tumor or true rota-



Fig. 7—Mrs. J. C. N., age 35. Serial roentgenogram. First picture shows patient in supine position, with ureteral catheter in place. Catheter entering kidney pelvis, with four small shadows thought to be adjacent to the catheter and within the kidney pelvis. The second picture is in the supine position, with the kidney pelvis injected with pyelographic media which completely obliterated the shadow of multiple calculi in the first picture. The cupping of the calyces is not altered. The third picture is in the upright position, showing the kidney pelvis to be normal and in normal position. The calculi shadows in the first exposure have descended with the liver and are now known to be in the gallbladder.

tion of the ureter cannot be eliminated quite so easily. However, one author worked out a simple technique for passing through zones of large curvature (angled): In cases where marked deviations in the ureter, such as acute curvature, succession of sinus spaces, etc., obstructed the passage of the catheter, the patient was placed in the Trendelenburg position, allowing the kidney to retain its normal place in the lumbar fossa (unless fixed by adhesions). The catheter could then be pushed further without difficulty.

Upright pyelograms give us a correct view of the kidney, showing its actual excursion during the normal physiological activity of the patient, i. e., while working, moving around, performing various tasks, or doing other things. The true position of the ptosed kidney is shown even during an attack of hydronephrotic pain.

This modest contribution to the study of the kidney as shown by upright pyelograms points out the significance and the knowledge to be gained by the clinician who uses such procedure. This can be carried out easily with a urological table where all positions can be made without moving the patient from one table to another. Shifting of the patient is inadvisable, even if it is but a question of a few steps, for the disturbance to the patient of such moving from table to table, while it may not be apparent, is more than we think. The upright pyelogram is at its best when the retrograde solution has been injected and catheters removed. We believe that upright pyelography alone will insure exact diagnosis, and spares the patient so much indecision as to the cause of his symptoms, procuring for him a relief from his suffering by the first operative procedure.

303-4-5-6 Van Antwerp Bldg.

Environment is part of the treatment of tuberculosis. It is well established that recovery from infection is facilitated by good nutrition, adequate sleep, mental peace, and the many intangible factors which may be included in the term "environment." Any hospital or sanatorium which does not give full cognizance to these fundamental physiologic and psychosomatic factors is not carrying out a complete therapeutic program. It may even be delaying the date of dismissal of patients and adding to the misery of patients and the expense borne by tax-payers. Money expended for job training, decorations, music, and flowers may be justified as truly as money spent for opiates or surgical treatment.—
H. Corwin Hinshaw, M. D., Tr. Nat. Tuberc. A.

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

J. C., Jr., aged 11 months, was brought to the Children's Clinic on August 12, 1948 with a history of diarrhea for three weeks. He had been having from 5 to 12 stools daily. He vomited for two days prior to admission.

Examination revealed an acute and chronically ill, dehydrated infant. The eyes were sunken and there was a loss of tissue turgor.

Hb.	48%
RBC.	3,690,000
WBC.	7,500
Polys.	54%
Lymphs.	35%
Monos.	11%

8/12/48

He had twenty six green watery stools during this period of twenty four hours.

He was given 500 cc. of lactate Ringer's solution intraperitoneally and 200 cc. of citrated blood intravenously and only water and kapectate by mouth. The temperature ranged from 101° to 104-3/5°.

8/13/48

He had twenty-eight green watery stools during this period of twenty-four hours.

Eighty (80) cc. of plasma were given intravenously. The temperature ranged from 101° to 104-4/5°. The vomiting had stopped and the dehydration had been overcome. Potassium chloride, 5 gr. t. i. d., and sulfadiazine were started.

8/14/48

Ten green watery stools. He was much improved at this time but the stools were still green, watery and too frequent. The temperature ranged from 100-2/5° to 101-2/5°.

8/15/48

The temperature dropped to normal and remained. Only one stool. Streptomycin, 20 mg. every three hours, was started at this time.

8/16/48

One stool. He was now started on one-half ounce of one half skimmed cow's milk every four hours.

8/17/48

No stools. One ounce of one half skimmed cow's milk every four hours.

8/18/48

One stool. Two ounces of one half skimmed cow's milk every four hours. He was discharged in good condition.

This, of course, was a severe acute gastroenteritis with dehydration.

DISCUSSION

I believe the essential points in treatment in this case in particular and similar cases in general center about four major procedures; namely (a) the withholding of food for a period of time (starvation); (b) the administration of fluids; (c) the transfusion of blood or plasma; and (d) the administration of food at the end of the period of starvation in gradually increasing amounts (diet).

1. STARVATION

Practically all patients with diarrhea have an irritation in the intestinal tract, so we like to put the intestinal tract at rest to allow the irritation to clear up. The only way to put the intestines at rest is to keep food out of them. Starvation should be continued until the toxemia is over and the number of stools is decreased. This may be from 1 to 5 days. I have found that a period of starvation less than 24 hours, even in mild cases, is of little value. Water is given freely even though they are vomiting. After water has been vomited a few times and the stomach is washed out, it soon stops, particularly after the dehydration has been overcome.

2. THE ADMINISTRATION OF FLUIDS

There is no doubt that dehydration plays a most important role in the production of toxic symptoms. Depletion of the body fluids and a consequent increase in the concentration of the blood bring about many derangements in metabolism and vital functions. The electrolyte loss and imbalance are restored with lactate Ringer's solution.

3. TRANSFUSIONS OF BLOOD

After the administration of fluids, patients with diarrhea often show an astonishing improvement within a period of less than two hours. This improvement is often temporary and misleading. It seldom persists in severe cases, even when adequate fluid intake is maintained. It is for this reason that the fluids should be reinforced by a blood transfusion. Transfusions should be repeated every 24 to 48 hours until they are

no longer needed. I feel strongly that blood transfusion is a most powerful, *if not the most powerful*, weapon at our disposal in the treatment of this condition.

4. DIET

One half skimmed cow's milk is used in all diarrheas, starting with one-half ounce every four hours the first 24 hours and increasing from one-half to one ounce every four hours on subsequent days. As the tolerance will permit, practically all cases should be back to a normal diet within a week.

THE USE OF DRUGS

Drugs play the smallest part in the severe cases. Kaopectate is given to all cases every four hours. Morphine and phenobarbital are given for rest when needed. Darrow has shown the value of potassium and this is given by mouth in the form of potassium chloride after the dehydration has been overcome. Sulfadiazine is started 24 hours after admission if the temperature is still elevated or blood is present in the stools. Most cases will do just as well without it.

Cathartics given after the onset of the diarrhea add insult to injury and are contraindicated.

Vitamin C may be necessary if the sulfonamides are given over a long period of time, as this interferes with the absorption of vitamin C.

I do not know whether the streptomycin was of value in this case or not. He was greatly improved when it was started but the use of it should be considered in cases responding poorly to other treatment.

Diabetes—There are times when a ready-prepared mixture is more practical than one made in the syringe by the patient. It has been our practice to give patients the desired mixtures premixed in vials in an amount sufficient for two or three weeks. This is less confusing to the patient, and the results have been comparable to those in which the patient made his own mixture in the syringe. Palmer reported that in his two years experience with insulin mixtures 25 per cent of the patients on mixtures were better controlled when the mixture was prepared in a vial rather than daily in a syringe.

During the past two years, we have placed all our diabetic patients who require 40 or more units of insulin, or who were not satisfactorily controlled on protamine zinc insulin, on a premixed combination and have noted an improvement in diabetic control following treatment with the mixtures.—Moore and Moore, J. M. A. *Georgia*, July '49.

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HERPES SIMPLEX AND HERPES ZOSTER

"Herpes simplex and herpes zoster are outstanding examples of virus diseases of the skin. The first illustrates the advances that have been made in our knowledge of virus diseases by new technics. The second is an example of how much still remains to be accomplished in this field.

"Herpes simplex and herpes zoster are frequently confused. There is good reason for this. They have more in common than one term of a binomial nomenclature. They are both virus diseases. The elementary lesions on the skin are small vesicles on an erythematous base. Histologically these lesions are almost identical.

"Although the similarities are striking, the differences between the two diseases are more fundamental. While the skin lesions of herpes zoster may resemble those of herpes simplex in appearance and histology, herpes zoster primarily attacks a sensory ganglion of a cranial or spinal nerve, as is evidenced by the pre- and posteruptive neuralgia. Herpes zoster lesions appear along the distribution of a sensory nerve supplied by the involved ganglion. The lesions are almost always unilateral. Herpes simplex lesions have no such limitation in localization. One attack of herpes zoster apparently

produces a solid immunity. Recurrences are extremely rare. Herpes simplex once established tends to recur, usually in the same or a neighboring site . . ."

The above are the opening paragraphs of the article by Ebert¹ dealing with this vexatious problem. Because of its length only a portion of Ebert's article can be discussed here.

Of herpes simplex the author says, "There is nothing more banal than a 'cold sore.' Some persons have recurring attacks, others never have had an attack . . ." And in regard to treatment we read that "care should be taken not to overtreat herpes simplex. Mild astringents on skin and lips, and gentian violet solution on the mucous membranes, are sufficient. Various attempts have been made to prevent distressing recurrent herpes. Injections of formalized herpetic brain emulsion, of formalized suspensions of virus elementary bodies, and of infected allantoic fluid from chick embryos have all been tried in attempts to raise the antibody titer, all with indifferent success in preventing recurrences. Unfortunately, local tissue immunity seems more important than antibody titer and is not influenced by such methods."

The Chicago investigator tells us that "with few exceptions the eruption of zoster is unilateral, and involves the areas of skin supplied with sensory nerves from one or two, rarely three, adjacent sensory ganglia." And also we read that "it is well known that in large clinics zoster seems to occur in minor epidemics, especially in spring and fall. Small local epidemics have also been reported. One point in favor of its infectious nature is that the disease is self-limiting and one attack produces a solid immunity to subsequent attacks."

Ebert says that "with the exception of ophthalmic zoster, in which the advice of an ophthalmologist is always required, the treatment of the local lesions of zoster is not much of a problem. Soothing lotions in the vesicular state, such as calamine lotion and mild antiseptic ointment, as 3 per cent vioform ointment in the later stages, are usually sufficient. I have found, particularly in the elderly, that protection from changes in temperature in the hyperesthetic

1. Ebert, Michael H.: The Herpes Problem, M. Clin. North America 33: 145 (Jan.) 1949.

area is essential. A thick pad of absorbent cotton under a layer of gauze is usually sufficient. Drafts should be avoided. Aspirin or empirin tablets given frequently enough to control the neuralgia are usually necessary. The control of severe pain and especially postzoster neuralgia has called forth a long list of remedies. All of them have earnest advocates. Certainly at present we can expect no remedy to have any effect on the virus per se." The author mentions other forms of treatment, including the use of pituitrin subcutaneously and autohemotherapy and vitamin C and thiamine hydrochloride.

Ebert's article dealing with the herpes problem is excellent and well written and the only portion with which one may perhaps take exception is his statement that the "treatment of the local lesions of zoster is not much of a problem." Not infrequently practitioners find that even after cutaneous manifestations have subsided many patients, particularly the middle-aged and elderly, continue to complain of severe and abiding and deep-seated pain in the muscles, and oftentimes treatment apparently has little effect in hastening the disappearance of the cutaneous lesions and in alleviating pain. In children and young people herpes zoster is either milder and tends to spontaneous healing or treatment is of considerable value. But a middle-aged or elderly victim of this condition is not infrequently ill and incapacitated for a considerable time.

SHARP RETURNS TO DEEP SOUTH

Appointment of two Regional Medical Directors, Dr. W. K. Sharp, Jr. and Dr. Mark V. Zeigler, has been announced by Acting Surgeon General W. Palmer Dearing, Public Health Service, Federal Security Agency.

Doctor Sharp will succeed Doctor Calvin C. Applewhite as Regional Medical Director for the Public Health Service in Region 6 of the Federal Security Agency with headquarters in Atlanta. Doctor Applewhite, who has held that office since 1945, is retiring from the Service October 1. Doctor Ziegler replaces Doctor Sharp as Regional Medical Director in Federal Security Region 3 with headquarters in Washington, D. C. Both appointments became effective on July 1.

In his new post, Doctor Sharp will direct Public Health Service activities in the six states and two Territories which comprise Region 6: Alabama, Florida, Georgia, Mississippi, Tennessee, South Carolina, Puerto Rico and the Virgin Islands.

He has held similar administrative assignments since 1940, stationed in Washington and Richmond. He has also served as Regional Consultant to state and local health departments in the South Central area, with headquarters in New Orleans. Doctor Sharp, who has been with the Public Health Service since 1913, was commissioned in the Regular Corps in 1936. He is a native of South Carolina. Dr. Ziegler, who has also had long experience in public health administration, will head the Service's activities in the District of Columbia, Maryland, North Carolina, Virginia and West Virginia, in his new appointment.

During the war, he had administrative assignments with the Office of Civilian Defense and the Third Service Command Headquarters in Baltimore and with the War Shipping Administration in Washington. A native of Maryland, Doctor Ziegler was commissioned in the Public Health Service in 1917.

Long a worker in the public health field, Doctor Applewhite is widely known in many states for his part in developing local health services. He is a native of Mississippi, entered the Public Health Service in 1915 and was commissioned in the Regular Corps in 1930.

PUBLIC HEALTH SERVICE REORGANIZED

A thoroughgoing reorganization of the Public Health Service, Federal Security Agency, to permit the Service to keep pace administratively with rapid developments in the concept of public health and with current advances in public health practice resulting from progress in medical science, has been approved by Surgeon General Leonard A. Scheele.

The changes, which bring the organization into closely-knit groupings in the respective areas of Public Health Service responsibility, were made after a year of study by a special Committee on Organization, headed by Deputy Surgeon General W. Palmer Dearing.

In approving the new structural pattern, Doctor Scheele pointed out that the reorganization will enable the Service to put forth its best efforts and will make possible more efficient management and direction of the programs authorized by the Congress.

"Through this reorganization," Doctor Scheele added, "we have been able to strengthen our general research effort, and through improved coordination of research activities to make the most effective use of research personnel. We have built the structure for a strong, dynamic medical-care arm, equipped to translate research findings into programs of remedial service to individuals. To carry out the Service's responsibilities in Federal-State relations we likewise have improved our administrative machinery for translating the best medical and scientific knowledge rapidly into preventive community health programs."

The reorganization regroups the various activities of the Service within the framework of the four previously existing bureaus so that closely related programs are brought together in a single overall administrative unit. The four bureaus, which, in turn, are comprised of several divisions are: Office of the Surgeon General, Bureau of State Services, Bureau of Medical Services, and the National Institutes of Health.

Changes include the consolidation of some previously existing administrative units, and the distribution of multiple functions formerly carried on by single units among several newly created divisions.

Under the reorganization, activities within the Office of the Surgeon General are limited to the overall staff or advisory functions of the Service. While operating functions have been removed from this office, the staff services of the Chief Dental Officer, Chief Sanitary Engineering Officer and Chief Nurse Officer continue to be available directly to the Surgeon General, and his deputy.

As presently constituted, the Office of the Surgeon General, under the direction of the Deputy Surgeon General, is composed of: Division of Commissioned Officers, Division of Public Health Methods, Office of International Health Relations, Office of Management Services, Office of Personnel, Office of Budget and Finance, and Office of Purchase and Supply.

The new structural plan brings together in the Bureau of State Services the Federal-State and interstate programs of the Service, and is intended to promote better coordination in programs with state and local communities. Activities of the bureau are carried on in three branches, each directed by an associate bureau chief under the general direction of the chief of the Bureau of State Services.

The three branches are: (1) Environmental Health Service, comprised of the Divisions of Sanitary Engineering, Industrial Hygiene, Water Pollution Control and the Environmental Health Center at Cincinnati; (2) Personal Health Services, consisting of the Divisions of Chronic Disease, Dental Public Health, Tuberculosis, Venereal Disease, and the Communicable Disease Center at Atlanta; (3) Administrative and Staff Services, made up of the Division of State Grants, the National Office of Vital Statistics, and the Offices of Public Health Nursing, Health Education and Administrative Management.

The environmental health branch was created by the transfer of the Division of Sanitary Engineering from the Office of the Surgeon General; by establishment of the Division of Water Pollution Control to administer the provisions of the Water Pollution Control Act of 1948, and by raising the activities of the Environmental Health Center to divisional status. The Industrial Hygiene Division existed in the bureau previous to the reorganization.

New divisions in the Personal Health Services branch are the Divisions of Chronic Disease which, in recognition of the growing importance of the health problems posed by chronic disease and the aging population, brings together existing programs in these fields into one unit; and Dental Public Health, established to carry on the growing public health responsibility in the dental health field. The major functions of these new divisions were previously located in the Division of States Relations which has been abolished.

Divisions just established or transferred to the Administrative and Staff Services branch of the Bureau of State Services are State Grants, which will operate and coordinate programs of grants in aid to states which are administered by the Public Health

Service, and the National Office of Vital Statistics. The latter unit was transferred from the Office of the Surgeon General, since vital statistics provide a guide line to Federal-State health needs. The functions of State Grants, also, were previously located in the abolished Division of States Relations.

The Bureau of Medical Services is concerned with services directed toward remedying individual medical needs, and is made up of programs of clinical care, evaluation of the Nation's health resources and aid in the construction of hospital facilities.

The bureau, which is under the direction of the chief of the bureau and several associate chiefs, is composed of the Divisions of Dental Resources, Nursing Resources, Medical and Hospital Resources, Federal Employee Health, Hospital Facilities, Foreign Quarantine, Hospitals and Administrative Services.

To facilitate the effective performance of the bureau's functions, the Divisions of Dentistry and of Nursing, previously in the Office of the Surgeon General, have been transferred to Medical Services, and the programs of these units have been strengthened. Similarly, the Division of Hospital Facilities, which administers the national hospital construction program and which was previously in the Bureau of State Services, has been transferred to Medical Services to bring related programs together organization-wise. A new division, Hospital and Medical Resources, has been established in the bureau to strengthen studies and leadership in developing the medical resources of the Nation. The functions of this division, heretofore, have been carried on as a part of a number of Service operations.

The changes, which were made over a period of many months, were first effected in the National Institutes of Health, where reorganization was completed some time ago. The recently created Institute of Experimental Biology and Medicine and the Microbiological Institute resulted from the integration of several divisions and laboratories into coordinated units. The Mental Health Institute was established through the transfer to the National Institutes of the functions of the Division of Mental Hygiene, previously in the Bureau of Medical Services. Two additional institutes, the National Heart Institute and the Institute of Dental

Research, have been established on authorization of the 80th Congress.

Components of the National Institutes of Health are: Office of the Director, in which are located the Executive Office, Division of Research Grants and Fellowships, Office of Scientific Reports, and Office of Research Planning; the Experimental Biology and Medicine Institute; Microbiological Institute; National Cancer Institute; National Heart Institute; National Institute of Dental Research; and National Mental Health Institute.

FELLOWSHIPS FOR LATIN-AMERICAN PHYSICIANS

The American College of Physicians and the W. K. Kellogg Foundation, with the cooperation of the U. S. Department of State and of medical schools in the U. S. A., Canada and Latin-American countries, will shortly inaugurate a program of postgraduate medical fellowships. Outstanding young physicians will be nominated to the College and Foundation by local committees in the countries to the south, and those to whom fellowships are awarded will be brought to this country for a year or more of special training. It is anticipated that the first fellows will begin their studies during the autumn of 1949.

Eligibility requirements include citizenship in the country from which application is made and familiarity with its culture and economy, graduation from an acceptable medical school and completion thereafter of an internship of 12 months or more, ability to use the English language, and assurance of a subsequent teaching affiliation with a medical school in the native country. Those needing some training in English will be assigned to a special course for the purpose in the United States.

Designed to stimulate progress in the teaching of internal medicine and research, and to help the most promising young doctors of medicine in these countries to prepare for teaching and research careers in their native countries, the program also will serve to increase understanding among the American republics by serving as a medium for the exchange of knowledge and acquaintanceships.

The American College of Physicians, operating through its Committee on Fellow-

ships and Awards, will undertake to arrange a suitable program of study in internal medicine or its subspecialties, such as cardiology, gastro-enterology, etc., in widely recognized medical education centers in this country, and to place the fellows appropriately under preceptors in these institutions.

The W. K. Kellogg Foundation will provide each fellow with a monthly stipend adequate for his basic living costs, an allowance for necessary travel within this country or Canada, and will defray the tuition for courses recommended by the preceptor and approved by the sponsors. In view of the pressing need of Latin-American medical libraries, the Foundation will reimburse the fellow for the cost of required textbooks on condition that they become the property of the medical school in which the fellow will teach upon his return home.

Representatives of the Foundation will visit the fellows periodically during their stay in this country for conferences with them and their preceptors, thus to follow their progress. They will also be visited at intervals after their return to their home institutions in an effort to evaluate the end results of their training and to offer any possible assistance to improve teaching, research and practice in the field of internal medicine in their respective countries.

MEDICAL STUDENTS INVITED TO VISIT ARMY HOSPITALS

Letters have gone out to approximately 6000 junior medical students apprising them of the internship opportunities in the Army Medical Department, according to Major General R. W. Bliss, the Army Surgeon General. In making the announcement, General Bliss extended an invitation to these students to visit Army General Hospitals this summer in anticipation of applying for an internship for training beginning July 1, 1950.

Each year the U. S. Army Medical Department offers internships to approximately 300 selected graduates of medical schools approved by the American Medical Association. Selected candidates are commissioned in the Medical Corps Reserve, called to active duty, and assigned to Army General Hospitals for a one year rotating internship commencing each July 1. Every considera-

tion is given each candidate's preference of hospitals for assignment.

Each of the ten hospitals engaged in the training of interns has been approved by the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges.

Among the various fields of medicine in which the new intern in the Army will receive training are: surgical service including urology and orthopedics; medical service including pediatrics and contagious disease; neuropsychiatric service; obstetrical and gynecological service; ophthalmology and otolaryngology, and laboratory service.

Each applicant must be a male not less than 21 nor greater than 32 years of age on the date internship commences, and must be a prospective graduate of a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association. He must meet the physical requirements, and be a citizen of the United States.

Applications must be received between October 18 and 25, 1949 in order to receive consideration, and must be forwarded through the Dean of the applicant's medical school. Appointments will be made upon the basis of scholastic standing, physical fitness and aptitude. Selections will be announced by telegram November 15, 1949. The Surgeon General will acknowledge receipt of each candidate's notification of acceptance.

While on active duty the intern will receive the pay and allowances of his grade. At the close of the year an intern may apply for a Regular Army Medical Corps commission if he so desires. Individuals who do not desire or are not tendered commissions will be relieved from active duty upon completion of one year of internship. The reserve commission remains in effect for a period of five years including the internship unless a resignation from this status is accepted by the Department of the Army.

The 10 hospitals which will participate in this program are: Gorgas Hospital, Ancon, Canal Zone; Tripler General Hospital, Oahu, T. H.; Percy Jones General Hospital, Battle Creek, Mich.; Brooke General Hospital, San Antonio, Texas; Fitzsimons General Hospital, Denver, Colorado; Oliver General Hospi-

tal, Augusta, Ga.; Letterman General Hospital, San Francisco, Calif.; Madigan General Hospital, Tacoma, Wash.; Walter Reed General Hospital, Washington, D. C., and Valley Forge General Hospital, Phoenixville, Penna.

Complete information and application forms may be secured from the Medical Professor of Military Science and Tactics at the nearest medical school or university having a Medical Reserve Officers Training Corps unit, or by writing direct to The Surgeon General, Attn.: Chief, Personnel Division, Washington 25, D. C.

INSTITUTE OF MENTAL HEALTH ESTABLISHED

Establishment of a National Institute of Mental Health to intensify efforts toward the prevention, control and treatment of mental illness has been announced by Surgeon General Leonard A. Scheele of the Public Health Service, Federal Security Agency.

The new institute, which was authorized by the 79th Congress, has been created in the National Institutes of Health, research branch of the Service. It will continue the program formerly carried out by the Division of Mental Hygiene in the administration of the Mental Health Act of 1946. This program is specifically directed toward gaining more knowledge of the cause, prevention and control of mental illness, training of personnel and developing community mental health facilities.

Dr. Robert H. Felix, Chief of the Division of Mental Hygiene since 1944, has been appointed director of the National Institute of Mental Health and the Division of Mental Hygiene has been abolished. Dr. Felix will serve under the general supervision of Dr. R. E. Dyer, Director of the National Institutes of Health. A career medical officer of the Public Health Service, Dr. Felix is also a diplomate of the American Board of Psychiatry and Neurology, a fellow of the American Medical Association, American College of Physicians and the American Psychiatric Association.

In announcing the establishment of the National Institute of Mental Health, Surgeon General Scheele pointed out that mental illness accounts for the hospitalization of over 600,000 patients, and partial incapacitation of millions more persons. It likewise

is a basic cause of many of the great social problems—delinquency, crime, divorce, alcoholism—which today afflict society.

"Experience has proved," he said, "that the solution to human illness requires the cooperative skills of many scientific disciplines. By becoming part of the National Institutes of Health, the mental health program will be able to take full advantage of the extensive investigations being made into other diseases as well as of the programs of basic research in the various laboratories and organizations of the National Institutes of Health."

The Advisory Mental Health Council, which was created by the National Mental Health Act, will assist in the formulation of policies for the new institute. The council consists of six outstanding authorities in the mental health field.

Within the Service, clinical and laboratory research into the cause and cure of mental illness are centered in two special hospitals, located at Lexington, Kentucky, and at Fort Worth, Texas. These hospitals also are used for the training of personnel. An intensified research program will be started with the completion of the new clinical center, now under construction at the National Institutes of Health in Bethesda, Maryland. A nucleus staff for this center is now being trained in several branches of clinical research. Research is carried on outside of the Service through research grants and fellowships awarded to non-federal research institutions and individual scientists.

Training of personnel and the establishment of community mental health facilities also are assisted through grants-in-aid. Despite the nation-wide shortage of professional personnel, mental health programs have been initiated in 27 states and territories and have been expanded in 24 others since passage of the Mental Health Act.

Personnel for state and local as well as national mental health programs are being developed through the training program. Grants are made to universities and other training centers to support courses in mental health specialties, and stipends are made available to graduate students.

The new institute will continue the demonstrations of community services which are being conducted by the Service, in cooperation with the State Health Departments, at

Prince Georges County, Md., and Phoenix, Arizona.

Temporarily, headquarters of the National Institute of Mental Health will be located in the Federal Security Building, Washington, D. C. Transfer will be made to the National Institutes of Health at Bethesda as soon as new buildings, now under construction, are completed.

AMERICAN CONGRESS OF PHYSICAL MEDICINE

American Congress on Physical Medicine will hold its twenty-seventh annual scientific and clinical session Sept. 6, 7, 8, 9 and 10, 1949 inclusive, at the Netherland Plaza Hotel, Cincinnati, Ohio. Scientific and clinical sessions will be given on the days of

Sept. 6, 7, 8, 9 and 10, 1949. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held Sept. 6, 7, 8 and 9. These courses will be offered in two groups. One set of ten lectures will consist of basic subjects and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to physical therapy technicians who are registered with the American Registry of Physical Therapy Technicians. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

CHANGING TIMES AND WORDS

W. A. Dozier, Jr.
Director of Public Relations

Perhaps the two words most frequently bandied about in the American social, political, and economic discussions and philosophy of today are security and freedom. To say that these words do not have the same connotations now that they had twenty-five years ago is to be extremely trite. But to say that most of us today do not actually know what we mean when we use these words may be grounds for a good argument. Still and all, do we know what we mean when we say we want economic security or we want to continue to live under a system of free enterprise? But even more important than this, do we know what someone else means when he uses these words?

For example, let us look at the matter of economic security. Not too long ago this phrase connoted something a man began working for at a relatively young age. He expected to have to work to achieve success through years of effort before he felt he was economically secure. A man was willing to be hard hitting, resourceful, and almost indefatigable to attain this goal. No one was expected to tell him how to reach security

and, unless he had made his success from ill-gotten gains, no one was to take his security once it was attained. Each man had his chance, and each pursued his hopes according to his own desires.

But since that day some twenty-five years ago many things have happened and many new thoughts have crept in. We have seen a depression that shook the world, and not too far on the heels of that came a war that in many ways shook the foundations of our civilization and our philosophies. The younger people who grew up under these world shaking events could hardly be expected to have the same outlook as those who have known other situations. Take for example those young men who early in life knew CCC and NYA. They were then hustled into military service where again the government and governmental orders were the all important things of the day. This situation must, at least, in part account for a more widespread feeling characterized by "the government can do for me better than I can do for myself." These people are seeking a security far different from those sought by their fathers. Granted the end result may purport to be virtually the same, but the method of reaching this goal is certainly different.

A comparable analysis of the thinking on freedom could be made, but the important aspect to consider is the relative standing of the two ideas. From the beginning of our country freedom was the keystone. But to take it to the field of free enterprise today one must realize that we have something far different from what was found a few years ago. If one looks at the laws of our land, it seems we are more and more trying to devise a safe enterprise instead of a freedom of enterprise. The purpose here is not to condone or condemn these changes in thought; however, they need pointing out, especially when we look at security and freedom in relation to each other.

At present security seems to be the more important idea to most people. Sociologists tell us that the pattern for the future is more and more people working for someone without any hope of ever earning great amounts of money. A recent survey by a popular magazine showed many more graduates of colleges seeking government jobs or positions with large corporations than those in-

terested in going into business for themselves. Trends in government all seem to be heading toward trying to "grant" security to all. And in the midst of all this everyone is using the words security and freedom, but many people are getting different connotations from these key words.

Where is it all leading? Perhaps no one knows. However, it seems advisable to get back to comparable footings on key words so that we do not awaken some day to find we have security but not "the" security we had in mind when we spoke of it. For each bit of security we are granted by someone a comparable amount of our freedom must be relinquished. How far are we willing to go? No one can answer that question for you. At least for the time being you are still master of your fate. No one should assume that he believes as does another unless he knows what connotations are given key words, but, once knowing these connotations, each person must decide the relative importance of key ideas.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

FACTS AND BELIEFS ABOUT POLIOMYELITIS

There are many pleasant things associated with summertime. The coming of warm weather brings vacations. It makes many of us think of visiting friends and relatives we have not seen in months or years. It sends us into attics and storerooms to find our bathing suits. It brings long rides in the family car. It is the time for family picnics. It means escape from tight, heavy winter clothes that are so comfortable in winter but cumbersome all the time. It brings freedom, complete or partial, from pneumonia, influenza, the bad cold and a number of other cold-weather diseases. Taken all in all, summertime is an enjoyable time.

But it also brings things that are not so pleasant. It usually brings a sharp increase in drownings. It increases the danger of being bitten by poisonous snakes. Many

types of accidents happen oftener in summertime than at other times. And certain diseases are a greater peril to health and to life itself then. Prominent among those warm-weather illnesses is poliomyelitis, or infantile paralysis.

Even though poliomyelitis is not a grave threat in Alabama at present, it is nevertheless a potential danger. At this time of the year especially, every parent should find out as much as possible about it. There is a particular need to find out how it can be avoided, how it can be recognized in the early stages, and what needs to be done when one gets it. There is also a great need for a lessening of the widespread fear of the disease. This fear is out of all proportion to its severity in many cases.

One thing about poliomyelitis which you may not know is that many people have it without knowing they do. Indeed you cannot be certain that you yourself have not had it. For the crippling type you see and read about is the unusual type. For every case of that kind there are several others

that leave slight crippling or none at all.

Alton L. Blakeslee, science writer for the Associated Press, paints an optimistic picture of the poliomyelitis patient's outlook in a new booklet. Its very title exudes optimism. For it is "Polio Can Be Conquered." The booklet is the latest in a series issued by the Public Affairs Committee, Incorporated, a non-profit educational organization.

"The conquest of polio now is in sight," Mr. Blakeslee wrote. "No one can predict just when the victory will come, or in what way. But medical science, with your help, is making such progress that there is real cause for optimism."

Mr. Blakeslee went on:

"The disease is feared largely because of its mystery. But slowly the pieces are being fitted together in one of the most intricate of medical jigsaw puzzles.

"Poliomyelitis is like a strange, unfamiliar house down one road in a fast-building neighborhood of medical knowledge. In the outside darkness, we cannot quite make out its shape and design. Inside, only a few rooms are lighted. One room with dim lights is Cause. We can make our way through the room of Symptoms. Next — much better lighted now—is Treatment. And nearby is a room of Financial Cost, so brilliantly lighted by the generosity of Americans that it holds no fears."

There are some other rooms for which no keys have yet been fashioned, Mr. Blakeslee tells us. But through the keyholes (which, fortunately, are there) we can see some dim outlines of the furniture. Someday, he is sure, we shall be able to unlock those doors. We shall be able to enter those rooms. Then they, too, will be alight. Then we shall know, for example, why one child is attacked by this dread disease and another misses it. We shall know a great deal more about how to prevent it. We shall have—or at least our doctors will have—a more satisfactory means of diagnosing it. And, most important of all, we shall have more effective ways of curbing it.

So much for long-range optimism. So much for the outlook for poliomyelitis' eventual conquest. That is all very good. But it does not mean much to the boy or girl who will develop poliomyelitis this summer. What is such a youngster's outlook? What does life offer him or her?

Mr. Blakeslee has good news for that youngster too. Let us turn again to his booklet:

"The disease seems rarely to hit anyone so severely that he becomes paralyzed. Even when that does happen, it doesn't mean that he will be left crippled or handicapped. Young Joan Smith, a pretty, dark-haired physical therapist at a New York City Hospital can and does set her patients straight on that score.

"When Joan was a high-school girl of fifteen, she was stricken with polio and was badly paralyzed. She couldn't move her legs or her arms. The muscles of her neck were partially paralyzed, as were some of the muscles of her shoulders, abdomen and back. For a time her future seemed hopeless.

"Today Joan is fully recovered. For her life work she chose physical therapy, and works a full, strenuous day retraining and reeducating the muscles of youngsters hit by polio as she once was. And their chances are good."

Then that Associated Press science writer gets down to figures and percentages. Again he brings a message of optimism:

"Forty to 60 per cent of the children or adults who do get the illness in recognizable form will recover completely, or almost completely, without any visible evidence of paralysis.

"Another 25 to 30 per cent will recover with only a mild degree of paralysis. There will be so little that they can carry on ordinary activities and live pretty much as they had planned to do.

"Only 15 to 25 per cent will be left more or less severely handicapped, unable to use some muscles. But rehabilitation and special devices can do wonders with them."

Poliomyelitis is a pretty rare disease. In May of this year, for example, only 13 cases were reported from all over the state. During the same 31-day period, the State Department of Health had reports of 1,165 measles cases. (Thus, reported measles cases outnumbered reported polio cases by nearly 90 to one.) The month of May also brought the reporting of 221 chickenpox cases, 168 mumps cases, 378 cancer cases, 152 pneumonia cases, 20 cases of scarlet fever, 72 cases of whooping cough, 166 cases of tuberculosis and 251 cases of influenza. Only 18 Alabama deaths were attributed to

poliomyelitis last year. Twenty-two other specific diseases killed more Alabamians during that 12-month period. The list would be extended to 29 if we included such mortality factors as conditions associated with pregnancy and childbirth, congenital malformations, premature birth, senility, suicide, homicide and accidents. As Mr. Blakeslee points out, poliomyelitis is so rare that it takes only a relatively few cases to constitute an epidemic. He sets the line of demarcation between non-epidemic and epidemic conditions at about 20 recognized cases per 100,000 population. Thus, according to his formula, Alabama may be said to be experiencing a poliomyelitis epidemic if, and when, there are some 600 cases in the state. This does not mean 600 cases reported within a given period, understand. It means that many Alabama boys and girls, and adults, actually having this disease at one time. Needless to say, the present situation is a far cry from such a ratio.

But poliomyelitis, like certain other diseases, can be a serious matter without attacking a large number of people. It can give parents anxious hours without becoming significantly fatal. This form of illness qualifies as a major health problem on several counts. For one thing, recovery is slow and by no means certain. For another, it is an expensive disease, requiring expert medical care and specialized nursing. Again, it leaves in the aggregate a large number of children and adults permanently handicapped. (Mr. Blakeslee estimates them at about 5,000 a year.) And of course, while poliomyelitis does not rank among the major killers, it is sometimes fatal. (Those whom it kills are estimated at about eight per cent of those who are attacked.)

Certainly fewer people would get poliomyelitis if our doctors knew more about the manner of its transmission. Mr. Blakeslee calls that "one of the tightly locked doors" in the house of polio knowledge. We do know something about it, however. We know, for instance, what must happen before a child or older person can get the disease: He must receive into his body an infinitely small organism known as a virus. Even the largest virus is much smaller than most bacteria. And the polio virus is one of the tiniest of viruses. You can get a pretty good idea of its size when I tell you that as

many as 25,000,000 could be accommodated on the head of a pin.

We are not sure we know exactly how that virus passes from the person having the disease to someone else. However, there is a strong inclination to think that close physical contact makes that transmission easier. Unlike the virus that gives millions of us bad colds and influenza in the winter, the polio virus is not believed to be transmitted in the tiny droplets that are sprayed out into the atmosphere when people cough or sneeze. There is a strong reason to believe it travels from the polio-sick to the well in food. It may make that journey on improperly cleaned dishes or eating utensils. Carelessly washed hands may become bridges of infection. These viruses may travel from person to person in dust particles floating about in the air. And the thought has been suggested that they may be admitted to the body through the skin.

Poliomyelitis has this in common with certain other diseases: You may have the causative organism in your intestinal tract without having the disease. If you do, you are capable of transmitting the disease to others. Why so many receive the viruses and so few, relatively speaking, develop the disease is one of the still-unanswered questions of poliomyelitis. Do the many have a great deal of resistance and the few very little? Is the person who develops polio just unfortunate enough to get the virus when he is in a run-down condition? Do certain physical or racial groups enjoy a greater degree of immunity to this type of infection than others?

Then there is the matter of seasonal incidence. Why does it smoulder like a neglected campfire in the winter and burst into flame in the summer? How does this fact square with another fact about poliomyelitis: that the polio virus is unusually tough, so tough that it has little trouble staying alive and dangerous during half a year's existence in a refrigerator? Does this mean that it is not warm weather *per se* but the conditions that warm weather brings which set mothers to worrying in the spring and summer? Do insects (which are much more numerous and active in warm weather) play the dominating role in polio virus transmission? Does the food we eat in warm weather lessen our resistance to that virus invasion?

Many authorities attribute cases to swimming in polluted water. But is that actually a factor? If it is, is it an important one?

Those questions and others like them cause many people to ask another question: "How does one get polio?" They caused Mr. Blakeslee to call this "one of the tightly locked doors" in the poliomyelitis structure. Like many another person who has studied this aspect of the broader problem, he freely admits: "We don't know yet how polio spreads."

Nevertheless, we have learned a great deal about the disease. Our medical leaders have made notable gains in their search for knowledge in this field.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

JUNE 1949

Examinations for diphtheria bacilli and Vincent's	180
Agglutination tests (typhoid, Brill's and undulant fever)	1,431
Typhoid cultures (blood, feces and urine)	521
Examinations for malaria	1,036
Examinations for intestinal parasites	3,693
Serologic tests for syphilis (blood and spinal fluid)	27,914
Darkfield examinations	22
Examinations for gonococci	2,199
Examinations for tubercle bacilli	2,930
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	122
Water examinations	1,525
Milk and dairy products examinations	4,068
Miscellaneous	284
Total	45,925

Poliomyelitis—The age distribution almost exactly parallels that of the respiratory infections presumably spread through direct association such as measles or diphtheria. There is a growing incidence in childhood toward a peak around late preschool or early school life followed by a declining incidence rate in older children and adults. Appreciable significance must be attached to the older age distribution in rural areas than in urban. The occurrence of antiviral properties in the blood in rural and urban population shows similar differences at various age levels. These phenomena strongly suggest that poliomyelitis is an infection in which person to person association is a factor of major significance.—*Anderson, Texas State J. Med., July '49.*

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

	May	June	E. E.* June
Typhoid	4	8	9
Typhus	10	14	26
Malaria	7	16	273
Smallpox	0	0	0
Measles	1165	423	312
Scarlet fever	20	21	30
Whooping cough	72	38	170
Diphtheria	9	7	12
Influenza	251	68	52
Mumps	168	108	91
Poliomyelitis	13	21	6
Encephalitis	0	0	1
Chickenpox	221	73	44
Tetanus	1	4	5
Tuberculosis	166	169	267
Pellagra	0	3	4
Meningitis	10	5	7
Pneumonia	152	118	148
Syphilis	1661	1356	1525
Chancroid	8	24	17
Gonorrhea	435	451	594
Tularemia	1	1	1
Undulant fever	4	7	8
Amebic dysentery	1	5	1
Cancer	378	339	196
Rabies—Human cases	0	0	0
Positive animal heads	47	27	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

PROGRESS ON ALABAMA'S STREAM SANITATION STUDY

Contributed by

J. C. Clarke, B. S., M. S. E.
Prin. San. and Pub. Health Eng.

The passage of Act 523, General Acts, 1947, which created the Water Improvement Advisory Commission, culminated efforts during the past few years regarding the enactment of legislation relative to stream pollution in Alabama. This Act became a law upon approval by the Governor on September 30, 1947. The Commission was not appointed until the latter part of January 1948, and the organizational meeting was held during the first part of February. The Commission is composed of fifteen members. There are four ex-officio members, namely, the State Health Officer, Chairman; the Director of the State Department of Conservation, Vice Chairman; the State Geologist; and the State Commissioner of Agriculture and Industries. One member is designated by the Dean of the School of Engineering, University of Alabama, and another member is designated by the Dean of the School of Agriculture, Alabama Polytechnic Institute. There are nine appointive members. The various interests represented on the Com-

mission select three individuals and the Governor appoints one to represent the particular interest. The appointive members are representative of county government, municipal government, wildlife conservation, lumbering, metals, paper, mining, textiles and chemicals. The Chief Engineer and Director, Bureau of Sanitation, State Health Department, serves as Technical Secretary to the Commission.

The legislative act creating the Water Improvement Advisory Commission set forth the powers of the Commission and appropriated funds for its operation during the fiscal years 1947-1948 and 1948-1949. In summary, the Commission was empowered to make a study of the sanitary conditions of the streams and prepare a report, together with recommendations, for submission to the Governor and the 1949 Legislature.

The director of the Commission's activities was appointed during February 1948, and a chemist and an engineer were employed on April 1, 1948. With this nucleus of personnel, plans were made to carry out the state-wide survey. The personnel appreciated the fact that this was a very large assignment to complete in such a short time. Plans were made, however, to complete the survey and prepare the final report by September 30, 1949. In developing plans for the state-wide study it was decided to follow, insofar as applicable to Alabama conditions, the general plan of operation that was developed by the U. S. Public Health Service and the Corps of Engineers in conducting the Ohio River pollution survey. It appeared advisable to place in operation two survey crews as soon as the required personnel, material, and equipment could be procured. The survey crews would operate from a specially built trailer laboratory and a field laboratory. Plans and specifications were developed for the trailer laboratory. Both laboratories have identical equipment and carry out the same type of work; however, the trailer laboratory is a self contained unit and can be transferred from place to place with a minimum of lost time. Equipment for the field laboratory has to be moved by truck to a suitable location where working space, lights, gas and water are available. It appeared advisable for each field crew to consist of an engineer, a chemist and two sample collectors. The engineer is in responsible

charge of the field crew, makes industrial waste and municipal sewage surveys, and establishes the various sampling points. The chemist is responsible for making all chemical, physical and bacteriological analyses. The sample collectors assist the engineer in establishing the various sampling points, wash glassware, and assist the chemists in performing certain minor chemical and physical determinations. Arrangements were made with the School of Engineering, Alabama Polytechnic Institute, to employ "Co-op." students in engineering as sample collectors. This arrangement has proved quite satisfactory.

With the above general plan of operation, the first samples were collected on May 15, 1948, and were examined at the trailer laboratory located at the water filtration plant in Decatur. The field operations could not have been started at such an early date except for an arrangement with the University of Alabama for lease of its laboratory trailer, which had been used on the Black Warrior River survey. This trailer was used until October 1948 when delivery was made on the Commission's trailer. A second chemist and a second engineer were employed on June 15, 1948 and assigned for training to the trailer laboratory located in Decatur. During the first part of July the trailer laboratory was moved to the water filtration plant at Gadsden, and the field laboratory was initially located at the Calhoun County Health Department in Anniston. Since that time two laboratories have been in the field.

The field work consists of three phases: (1) industrial waste and municipal sewage surveys, (2) physical, chemical and bacteriological analyses, and (3) biological studies. In the particular basin being studied the engineer visits each industry that is discharging liquid waste of a pollutorial nature. Information is obtained from the industry as to the types and quantities of raw materials used, the amount of industrial water that is used, the number of employees, the type and quantity of products produced, and the type, strength and quantity of waste that is discharged. From this information it is possible, in most instances, to approximate the amount of industrial waste that is being discharged into the stream. This approximation is calculated in terms of sewered population equivalents. On the municipal sewage

survey an inspection is made of the treatment plan, a visit is made to the various sewer outfalls, and information is obtained as to the number of people served by the sewerage system and the degree of efficiency in which the sewage treatment plant is operated.

The general plan in selecting stream sampling points is to establish at least one point a short distance above the source of pollution, and two or more points are established below the source of pollution. The samples are collected at the center of the stream and at mid-depth. Sampling points are also established on certain streams that are known to be free from any appreciable amount of sewage and industrial pollution. The results of such sampling points are needed in establishing a base line of stream quality in the particular area. Several routine physical, chemical, and bacteriological examinations are made of each sample that is collected. The major determinations are as follows: (1) temperature, (2) turbidity, (3) color, (4) pH value, (5) alkalinity, (6) hardness, (7) dissolved oxygen, (8) five-day biochemical oxygen demand, (9) and the most probable number of coliform bacteria. The following special determinations are made when indicated: (1) ammonia, (2) nitrites, (3) nitrates, (4) iron, (5) phenols, and (6) total and volatile suspended matter. All chemical and bacteriological examinations are made in accordance with *Standard Methods of Examination of Water and Sewage, Ninth Edition*.

Along with the industrial waste and sewage surveys and the chemical and bacteriological determinations, the third important phase of the survey work is the biological studies. The development and continued growth of biological organisms in a body of water determine the rise and fall of the population of the aquatic organisms present. The biological activity serves as a basic food supply for the more desirable species of aquatic life such as fish, shellfish and wild fowl. Considerable thought was given to the type of biological studies to be undertaken. The amount of time available for such studies made it mandatory that they be accomplished in a relatively short period of time. It did not appear feasible to make the "classical" biological survey, which usually consists of collecting plankton and mak-

ing a survey of the bottom organisms. Advice was sought from the Agricultural Experiment Station of the Alabama Polytechnic Institute in making the studies as that agency has made outstanding contributions to the knowledge of fish production in artificial lakes during the past ten to fifteen years. Various methods of making the studies were explored with Professor H. S. Swingle and his associates in fish culture. It was decided that the most practical approach to the problem, in the amount of time available, was to make fish population surveys of a relatively clean stream and a stream that was known to be polluted with sewage and industrial wastes. The Experiment Station was retained, on a consultant fee basis, to make these studies of the Coosa River as a relatively clean stream and portions of the Warrior River as a grossly polluted stream. Plans were made to begin these studies during June 1949, and they should be completed by the latter part of August. Several areas of the Coosa River will be sampled, the fish collected, weighed, and sorted as to species. Similar work will be done at several points on the Warrior River. This information will be of value in determining normal fish populations to be expected in two of the large rivers possessing different sanitary conditions.

In developing plans for the field survey and for preparation of the report, the state was divided into twelve major drainage basins; namely, Alabama, Cahaba, Chatahoochee, Chotcawhatchee, Conecuh, Coosa, Lower Tombigbee, Mobile Basin and Bay Area, Tallapoosa, Tennessee, Upper Tombigbee and Warrior. The following minor basins were included under the heading of Miscellaneous Basins: Blackwater, Chipola, Escatawpa, Perdido and Yellow. In preparing the report each basin will be discussed separately and the final report will include a compilation of the various drainage basin reports, together with a summary and recommendations. Insofar as possible, it has been the policy to continue work through to completion in each basin. However, certain operational difficulties have precluded strict adherence to this plan.

As of June 15, 1949, both laboratories had established 743 sampling points, collected 6,171 samples and performed 45,579 physical, chemical and bacteriological tests. In ac-

completing this work the trailer laboratory was located at Decatur, Gadsden, Jasper, Tuscaloosa, Reform, Foley, Bayou LaBatre, Mobile and Monroeville. The trailer laboratory was moved to Livingston on June 3. The field laboratory has been located at Anniston, Birmingham, Ozark and Auburn. The field laboratory was moved to Montgomery during the middle of June. The amount of stream sampling work and industrial and sewage wastes surveys that remain to be completed on or before August 15 are as follows: Alabama Basin 75%, Upper Tombigbee Basin 50%, Lower Tombigbee, Cahaba, and Conecuh Basins 25%, and Coosa and Tallapoosa Basins 10%. Stream sampling has been completed in the Warrior Basin; however, approximately 35% of the industrial waste and municipal sewage surveys have not been completed.

It is essential that accurate data regarding stream flow be available in a survey of this nature. Consideration was given by the Commission to employing additional personnel and obtaining stream flow data. A very satisfactory method of obtaining these data was worked out with the Montgomery Office of the U. S. Geological Survey. This arrangement effected a considerable saving in moneys for the Commission and the work is being done by an agency, one of whose major functions is collecting stream flow data. It is felt that these data obtained by the Geological Survey will be of more value than if they had been obtained by personnel of the Commission. The normal procedure in obtaining these data is for the engineer, when the sampling point is selected, to establish a reference point. Each time a sample is collected a measurement is made from the particular reference point to the surface of the water. A list of the various sampling points is given the Survey and it in turn makes stream flow measurements. Approximately once each month the Commission furnishes the Survey the various reference points readings that have been taken. In turn the Survey supplies the Commission with the required stream flow data. This arrangement has been quite satisfactory.

Very little, if any, data are available on the efficiency of operation of sewage treatment plants in Alabama. In view of this, several efficiency test were made on sewage treatment plants. The work consisted

of making certain determinations on the sewage as it enters the plant and determinations on the treated sewage as it leaves the plant. Information on operating efficiency should be of value in the design of future treatment plants and should also stimulate better operational procedures.

In connection with studies of the Mobile Basin and Bay Area a plan was worked out with the State Department of Conservation for conducting extensive bacteriological studies in the shellfish producing areas of Mobile Bay and coastal waters. The purpose of this survey is threefold: first, to determine the bacterial quality of the present shellfish producing areas; second, to determine the bacterial quality of other areas that may be used for planting shellfish; and third, to determine the source of pollution of these areas. This work was completed during the first part of May.

The Bureau of Sanitation, State Department of Health, desired information on the efficiency of septic tanks and disposal fields located at schools and small slaughter houses. Arrangements were made with the Bureau and affected County Health Department personnel for selecting, sampling, and delivering samples to be analyzed to the laboratories. Samples of septic tank and disposal field effluents were collected during the school period, composited and determinations made of five-day biochemical oxygen demand and settleable solids. The results should be of value in designing future installations.

As required by the Act creating the Water Improvement Advisory Commission, a preliminary report of the activities of the Commission from May 15, 1948 to March 31, 1949 was prepared and submitted to the 1949 Legislature and the Governor. On the basis of the findings of the survey to date, certain amendments to the present Act were prepared for consideration by the Commission. The Commission at its May 1949 meeting considered the proposed amendments. It was the wish of the Commission that the chairman appoint a special committee to study the proposed amendments and make such recommendations as it felt appropriate to the Commission at a meeting to be held during the latter part of May. The committee made several changes in the proposed amendments and the recommendations of

the committee were accepted unanimously by all members of the Commission present at the meeting, there being only three absent. The recommended amendments have been introduced into the 1949 Legislature. The proposed amendments to the present Act will give the Commission the following additional powers: (1) to exercise general supervision over the administration and enforcement of all laws relating to pollution in the waters of the state; (2) to establish standards of quality for any waters in relation to their reasonable and necessary use; (3) to receive and examine applications, plans, specifications, and other data and to issue permits for the discharge of sewage, industrial wastes, and other wastes into the waters of the state; (4) to adopt rules and regulations to carry out the provisions of the Act; (5) to issue orders directing particular owners or persons responsible for pollution to obtain within a reasonable time such operating results toward the control of pollution as the Commission may prescribe; (6) to make investigations and inspections to insure compliance with any orders, rules or regulations which it may issue or adopt; and (7) in case any person against whom any final order of the Commission has been issued does not comply with the order within sixty days the Commission may commence an action in the circuit court of the county in which alleged pollution initially occurred for the enforcement of the order against the party or parties against whom the order has been made.

Surgical Amebiasis.—Amebiasis occurs frequently enough in the United States for every physician to encounter it sooner or later. The return of thousands of veterans exposed to its invasion signifies the greater number of cases to be anticipated in the future.

The diagnosis often is missed because of failure to think of this disease and the unwillingness of many physicians to do stool examinations. There is a high probability that most of the cases in the earlier stages can be diagnosed by the employment of roentgen examination and stool-testing procedure. Examination of the blood may also indicate an amebic condition.

Amebiasis frequently expresses itself in many bizarre symptoms, and the advanced stages can be dangerously involved. Acute appendicitis is simulated when the disease is in an advanced stage. The condition may be either amebiasis or an appendix about to rupture. Operation is possible, but a high percentage of mortality in surgical cases in the presence of amebiasis has been effectively demonstrated.—*Lisenby, J. Florida M. A., July '49.*

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR APRIL 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During April 1949			April Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	6636	**	**	26.3	24.8	27.2
Total stillbirths	180	**	**	26.4	29.3	29.9
Deaths (stillbirths excluded)	2230	1306	924	8.8	8.3	9.2
Infant deaths:						
under one year	280	141	139	42.2	37.5	41.4
under one month	182	101	81	27.4	25.7	26.8
Cause of Death						
Tuberculosis, 001-019	68	29	39	27.0	31.7	41.7
Syphilis, 020, 029	12	1	11	4.8	9.9	9.6
Dysentery, 045-048	3	3		1.2	***	***
Scarlet fever, 050					0.4	
Diphtheria, 055	1	1		0.4	0.4	1.2
Whooping cough, 056	3	1	2	1.2	2.4	4.4
Meningococcal in- fections, 057	2	1	1	0.8	0.4	
Poliomyelitis, 080, 081	1		1	0.4	0.4	0.4
Measles, 085	13	8	5	5.2	1.2	3.6
Typhus fever, 100, 108					1.2	0.4
Malignant neoplasms, 140-200, 202, 203, †	197	152	45	78.1	78.1	83.8
Diabetes mellitus, 260	30	22	8	12.0	12.3	13.2
Pellagra, 281	3	1	2	1.2	2.0	3.6
Vascular lesions of central nervous system, 330-334	256	151	105	101.5	94.0	95.8
Other diseases of nervous system, 300-318, 340-398	36	22	14	14.3	11.1	***
Rheumatic fever, 400-402	5	1	4	2.0	2.4	***
Diseases of heart, 410-443	655	406	249	259.8	203.5	192.5
Disease of arteries, 450-456	18	13	5	7.1	13.1	9.2
Other diseases of cir- culatory system, 444-447, 460-468	36	23	13	14.3	1.6	***
Influenza, 480-483	35	17	18	13.9	7.9	27.3
Pneumonia, 490-493	97	40	57	38.5	32.5	49.3
Bronchitis, 500-502	4	2	2	1.6	1.6	0.4
Appendicitis, 550-553	8	4	4	3.2	1.6	4.4
Intestinal obstruction and hernia, 560, 561, 570	19	13	6	7.5	5.2	9.2
Gastro-enteritis and colitis (under 2) 571.0, 764	7	6	1	2.8	1.6	0.8
Cirrhosis of liver, 581	10	6	4	4.0	5.2	4.8
Diseases of pregnancy and childbirth, 640-689	12	5	7	17.6	29.4	27.2
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	4	2	2	5.9	7.7	7.1
Congenital malforma- tions, 750-759	32	23	9	4.8	4.5	***
Accidental deaths, total 800-962	136	91	45	53.9	63.1	58.1
Motor vehicle acci- dents, 810-835, 960	54	43	11	21.4	24.6	18.8
All other defined causes	403	224	179	159.8	171.7	229.0
Ill-defined and un- known causes	128	40	88	50.8	53.2	67.0

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the April report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204), and mycosis fungoides (205).

BOOK ABSTRACTS AND REVIEWS

Practical Aspects of Thyroid Disease. By George Crile, Jr., M. D., F. A. C. S., Department of Surgery, Cleveland Clinic. Cloth. Price, \$6.00. Pp. 355, with 101 figures. Philadelphia and London: W. B. Saunders Company, 1949.

This is a very timely publication due to the rather recent changes in the concept of the treatment of thyroid disease. The author has admittedly drawn upon his own personal experience and has excluded any statistical records accumulated by the Cleveland group. This was probably a wise decision as the treatment of thyroid disease from a preoperative and operative point of view has undergone such radical changes since the beginning of the accumulation of statistical figures on thyroid conditions.

The advent of the antithyroid drugs and the use of radio-active iodine have greatly individualized the treatment of patients who present themselves with symptoms of hyperthyroidism. These recent advances have made the treatment of thyroid disease much more interesting from the medical point of view, as well as from the surgical outlook. Now, more than ever before, is close cooperation between the internist and the surgeon necessary in the proper management of these conditions. It is imperative that both groups have as complete information as possible on all of the newer aspects. Neither the internist nor the surgeon can afford to be dogmatic in his choice of treatment. The author strongly indicates that the question of medical versus surgical treatment of hyperthyroidism is not completely settled and must be individualized. He divides the patients with hyperthyroidism into four main groups from a therapeutic standpoint. This grouping seems to be well thought out and serves as a very sound working basis. There are, of course, exceptions in all of the groups. It is interesting to note that the author gives a detailed description of that one class of patients with hyperthyroidism which is so often overlooked and mismanaged. This is the type of patient which has been spoken of as the apathetic thyroid by Dr. Frank Lahey. He was the first in the reviewer's knowledge to so classify this group of patients and to warn against the improper management of them. The author follows through with this idea and very adequately presents their particular problem.

A plea is made for the anatomical dissection of the thyroid during the course of thyroidectomy. This is a point well taken. It would seem that there should be no question as to its advantages in most instances.

Fully a third of the book deals with tumors of the thyroid. These are approached from a benign and malignant viewpoint. Certain classifications are given and tables are included comparing the different types.

The author has created a very satisfactory working basis for the recent concept of thyroid disease. The book should be useful to those attempting to treat thyroid disease from either a medical or surgical standpoint.

John L. Branch, M. D.

Atlas of Peripheral Nerve Injuries. By William R. Lyons, Ph. D., Associate Professor of Anatomy, University of California Medical School; and Barnes Woodhall, M. D., Professor of Neurosurgery, Duke Medical School, Durham, N. C. Cloth. Price, \$16.00. Pp. 339. Philadelphia and London: W. B. Saunders Company, 1949.

Occasionally there comes to the medical publication reviewer a book, new in its concept, factual in detail, with excellent and convincing plates, readable and explicit in opinion rendered, rational in deduction, and representative of beauty in art and format—a rarity in medical publication. Dr. William R. Lyons, Associate Professor of Anatomy, University of California Medical School; Dr. Barnes Woodhall, Professor of Neurosurgery, Duke University Medical School, Durham, North Carolina; and W. B. Saunders Company have given us such a book.

These authors have collected and correlated their investigations in peripheral nerve injuries while members of the Armed Services. From this abundant source they have given us pictorial proof of their pathological and surgical experience.

Six chapters contain the information of this Atlas. All chapters have brief but both pertinent and potent substance.

The chapter on "The Peripheral Nerve" is devoted to the terminology and anatomy of the components of a nerve. "Completely Severed Nerves" are thoroughly discussed, illustrating by word and by microscopic section the histopathology of the nerve components in both the proximal and distal fragments. "Traumatic Nerve Lesion and Continuity," probably better known as a partially severed nerve or nerves with traction or stretches lesions, is adequately discussed with the description of the histopathology in each anatomical component of the nerve. Associated nerve and vascular lesions are brought in as an enlightening part of this subject. "Experiences with Nerve Grafts" is reported with some prominence in the final chapter.

Of utmost interest to the surgeon who deals with peripheral nerve trauma is the chapter on "Nerve Suture." In surveying a small series of immediate suture, it is determined by the authors that it is impossible to determine the extent of pathology along the nerve stump within a day or two after the injury. However, after three weeks, edema, hemorrhage, thrombosis, and neuromatous proliferations had traveled one centimeter

beyond the obvious gross changes. The advantage and disadvantage of early suture and the advantage and disadvantage of delayed suture are reasonably declared.

This profusely illustrated, well planned book should be available for ready reference on the desk of every surgeon dealing with peripheral nerve injury.

In discussing the scientific advances benefited by warfare, Dr. R. Glen Spurling in the Foreword of this book recalls William James' observation "that which is needed during peace is the moral equivalent of war." It is hoped that the authors will realize their desires for an opportunity to survey large groups of rehabilitated war veterans so that a future supplement or a separate monograph can add further to the knowledge of the histopathology of peripheral nerve repair.

Elias N. Kaiser, M. D.

Psychodynamics and the Allergic Patient. By Harold A. Abramson, M. D., F. A. C. A., Associate Physician for Allergy, The Mount Sinai Hospital, New York, N. Y.; Consulting Physician for Allergy, Sea View Hospital, Staten Island, N. Y.; Assistant Professor of Physiology, Columbia University, New York, N. Y. Cloth. Price, \$2.00. Pp. 81. Saint Paul and Minneapolis: The Bruce Publishing Company, 1948.

This brief though valuable book is an official publication of the American College of Allergists. It is of especial significance inasmuch as it constitutes the first official recognition by that body of the relationship of psychiatry to clinical allergy. This recognition took the form of a paper entitled "Psychodynamics and the Allergic Patient" presented at the 1947 convention of the College. Recognizing the need for a greater correlation between psychiatrists and allergists in the treatment of allergic patients, the College arranged a panel discussion to follow on the paper. The book constitutes a report of these proceedings.

By way of introduction Dr. Abramson has included a historical section with quotes from and illustrations of medical literature prior to the scratch and patch era. Those familiar with the history of the psychosomatic approach to illness will promptly recognize again the early evidences of cracking in the dualistic barrier between mind and body. This section serves to reiterate the hoariness of the psychosomatic concept.

The second section of the book is devoted to the paper which Dr. Abramson presented at the convention. The author is an allergist and an experimental physiologist of considerable renown and experience. He ventures into the field of psychodynamics in its relationship to immunology as a cautious Freudian, avoiding the pitfall of involved dynamic speculation. He rejects the histamine theory of allergy as explaining all. He then proceeds to provide case records exemplifying a distinction which he makes in evaluating those patients providing allergic symptoms. The

first group includes those cases in whom the diagnosis of allergy is definite, based on immunologic postulates. These are distinguished from the second group, consisting of those cases which provide an allergic symptomatology without immunologic confirmation, in which the emotional and the autonomic influences must be considered of greater etiologic significance. The author concludes on a note of hope that the journals devoted to the fields of allergy and psychosomatic medicine would liberalize their policy to include reports of cases not purely allergic or psychosomatic, but having a mixed content of interest to both specialties. He urges that systematic postgraduate instruction in psychodynamics be a part of the training of the allergist.

The third section consists of the report of the panel discussion with both allergists and psychiatrists as discussants. In the main, this was a rather mild affair with no controversial issues touched off. There seems to be little question in the minds of the discussants that psychodynamics must be a constant consideration of those devoted to the treatment of the allergic patient.

This book is particularly recommended for the allergist. It is lamentably a fact that for the period 1939-1946, the only American journal devoted to clinical allergy included but one brief report relating specifically to emotional problems in the allergic state, in contradistinction to 20 such articles in issues of psychosomatic medicine over the same period. The allergist, therefore, despite the most avid reading, would best serve his interest to include this book on his "must" list.

Philip S. Bazar, M. D.

Morton's Toe—Morton's toe is a chronic, disabling, clinical entity characterized by severe paroxysmal pain in the region of the fourth metatarsophalangeal joint. This syndrome is caused by tumefactive lesions involving the most lateral branch of the medial plantar nerve in the region of its bifurcation at the web between the third and fourth toes, and most probably results from the chronic trauma of ill-fitting shoes. Proliferative fibrosis of the nerve is a constant microscopic feature. The exact histological classification of this lesion is too controversial to include in this presentation.

In the typical case, the patient complains of pain in the plantar aspect of the base of the fourth toe. The pain is severe, paroxysmal, usually radiates into the fourth toe, and occasionally the other toes. It may be burning, shooting, stabbing, or "like an electric shock." The attacks may last from several minutes to several hours in severe cases, are usually unaffected by any immediate therapy, and disappear spontaneously. Many patients in an effort to obtain relief, rest, remove the shoe, and massage the toe with occasional success. Walking at times is impossible.—Redler, *New Orleans M. & S. J.*, July '49.

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ASTHMA AND HAY FEVER

Miscellany

PENICILLIN TABLET PREVENTS GONORRHEA

Development of gonorrhea in men can be prevented in many cases by administration of a single penicillin tablet a short time after exposure, a study made among military personnel shows.

Writing in the July 16, 1949 issue of The Journal of the American Medical Association, Drs. Harry Eagle, G. E. Beckmann, and G. Mast and Lieut. (jg) A. V. Gude, Capt. J. J. Sapero, and Hospital Man Chief J. B. Shindledecker, of the National Institutes of Health, U. S. Public Health Service, Bethesda, Md., and Research Division, Bureau of Medicine and Surgery, Navy Department, Washington, D. C., say:

"In a control group of 176 to 195 men receiving a placebo tablet which contained no penicillin, there were 43 cases over a period of 24 weeks in a total of 3,616 liberties (508 cases per thousand men per year, and 11.9 per thousand liberties).

"In the experimental group, consisting of 151 to 213 men who received a single penicillin tablet, there were five cases in 3,218

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liberties (1.8 per thousand liberties, and 105 per thousand men per year). In three of these five cases there was reason to doubt that the penicillin had been received.

"When the size of the tablet was subsequently increased, there was one questionable case over an eight week period in an experimental group of 87 to 141 men with 569 liberties. When the penicillin was then made available to the entire station on a voluntary basis, so that it was taken only by those who had actually been exposed, there was again only one questionable case in 1,454 liberties followed by penicillin prophylaxis. From the previous control experience one would have anticipated at least 20 cases in these two groups of 2,023 liberties.

"In the dosages and under the conditions here used, there were no toxic complications, no clear-cut instance of suppressed syphilitic infection, and no indication of the development of penicillin-fast strains of gonococci.

"The results here reported in the prevention of gonococcal infection bear out the general thesis that infections susceptible to treatment with penicillin may be successfully aborted during the incubation period by relatively small doses of penicillin. Thus, it may be possible to terminate epidemic outbreaks of such infections by the daily peroral administration of penicillin over a limited period of time to the entire susceptible and exposed population."

NEXT ANNUAL MEETING

BIRMINGHAM

APRIL 20-22, 1950

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BACKGROUND

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No. 3

THE ROAD AHEAD

FRANK L. CHENAULT, M. D.

Decatur, Alabama

It is with joy and pleasure that I am permitted to participate in these exercises. This is a momentous occasion and will be remembered by you graduates long after you have forgotten who spoke to you or what was said.

Forty-five years ago, I was Valedictorian of the Class of 1904 of the Birmingham Medical College. The exercises were held in the old Bijou Theater on Third Avenue North. In my stage fright, I drank a whole pitcher of water as I struggled through that major operation. Richmond Pearson Hobson, hero of the then recent Spanish-American War, delivered the Commencement Address. In contrast, he was a finished orator.

I am invited here on this occasion to bring you salutations from and to welcome you into the great throng of followers of Aesculapius, and more particularly to bring you greetings and welcome from the Medical Alumni of Alabama, of whom you this night become members.

This is a great time to be alive; great because of its achievements; great because of its turmoil and confusion; great because of its extremes; great because of its intelligence and its follies. You are voluntarily entering this profession in a time of flux and will have a ringside seat to watch the process of crystallization and to help in that process. You are needed at this time for what you know or can learn and for what you can do.

Address delivered before the graduating class of the Medical College of Alabama, Birmingham, June 3, 1949.

You have made the good choice. Many complex questions will present themselves to you or will be presented. The philosophy of life presented by Knox Ide at a recent Alumni Dinner represents the true American viewpoint, and I ask you to re-read his speech in the Alumni News. He warns that the individual is "losing his right, and even his desire, to be the architect of his own destiny. Initiative, incentive and liberty are being willingly traded for a mess of putrid pottage falsely labeled security." Regimentation and compulsion are the instruments by which medicine, as it was, is being transformed from a profession into a racket.

When the slimy hand of politics seizes the steering wheel, medicine in America will degenerate; we will lose our proud position of having the best health and the best medical care of any people in the world. The same evil forces which plowed up very third row of cotton and killed the brood sows to produce the abundant life are now demanding the regimentation of the medical and allied professions with political control. Do we want a medical WPA as overlord?

Only a few years ago, and that in war time, Federal control and intimidation made of our merchants a generation of liars. Do you remember how they lied about cigarettes and white goods? They had to do it to stay in business.

Many of the greatest discoveries in medicine have come to pass during my lifetime—a great many of them during my professional life. I began in the days of "The Doctor on Horseback" which merged into "The

Horse and Buggy Doctor." The general conditions have always determined the welfare of the doctor. We made our rounds on horseback carrying our medicines in saddlebags which were built to fit across the saddle. These saddlebags were hard and angular, and the messenger who came for us and was returning with us soon learned to keep his distance.

Intelligence is an intangible thing made up of two factors, heredity and environment. Personality, like the color line, is a gift of God. The greatest truths in life are often the simplest. Plato recognized two kinds of mental disease, to wit: madness and ignorance.

It is said that W. L. Moody of Galveston, Texas, has a motto under the glass top of his desk which reads: "The measure of a man is the size of the thing it takes to get his goat." Some one has written that it is not the mountain ahead that wears us out but the grain of sand in our shoe. The little disappointments, the little troubles, the little problems are often the toughest ones to lick. All vices are merely overgrown virtues.

When Dr. Kracke invited me to come down here for this occasion, I felt flattered and accepted gladly, notwithstanding I felt totally inadequate. He then explained to me that it was because of the two accidents—the presidency of the Medical Alumni, and my selection last year as the outstanding general practitioner of Alabama—for these coincidences I was chosen. So I appear before you in the name of and on behalf of these two bodies.

The Alumni—that means you and me and all the others with medical diplomas from Alabama—can, I hope, be of some help to our Alma Mater. I believe the Alumni had some influence and were a factor in procuring our present four-year school. Since it is partly our baby, it behooves us to play baby-sitter and wet nurse until it gets out of its swaddling clothes. We need more money, more facilities and more support. We can and should cast in our mite.

That brings us to the other horn of the dilemma—the general practitioner in whose name I stand here. The official definition of a general practitioner is: "A general practitioner is a legally qualified doctor of medicine who does not limit his practice to a particular field of medicine or surgery."

During the last three years, the American Medical Association has been quite active in trying to develop an adequate supply of medical services and at the same time maintain its quality. We know the American people have had and do have the most comprehensive and highest standard of medical care ever enjoyed at any time by any people on God's green earth.

The general practitioner is either a country doctor, a town doctor or a city doctor, according to where he chooses to practice. There is no compulsion and no regimentation—those twin cancers, which, like termites, are eating at the foundation of the most beautiful structure in the world, the Temple of Medical Practice.

The American Medical Association has established a Section on General Practice of Medicine, and hospitals across the country are including or establishing in their staffs "General Practice Sections." There is a definite movement on foot to recognize and uphold the prestige of the general practitioner.

We now have the American Academy of General Practice and are in the process of organizing the Alabama Academy of General Practice, the charter membership of which is open through September. Eligible and interested general practitioners may become charter members of the Alabama Academy. I had the pleasure of meeting with this group during our recent state medical meeting, when I made application for membership, which has since been approved. Members are *ipso facto* members of the American Academy.

There are sparsely settled areas in the United States where it is difficult for persons to obtain the quality of medical services they desire. The same is true to some extent in Alabama. Bear in mind that these people want the highest type of medical care with all the trimmings. They not only want thermometers, stethoscopes and blood pressure instruments used but also insist on x-ray, electrocardiograms, basal metabolism determinations, and most modern laboratory procedures, clinical and pathological. This is as it should be. These things should be made available. These people are human beings. But such services cost the doctor more than T-bone steaks. But we must not forget that with our roads and our transportation, these patients can be carried to their physicians

in offices, clinics and hospitals where they can get better care much quicker and cheaper than if the doctor made home calls.

A great deal is being said about the high cost of medical care; it should be about the cost of high medical care. According to what is done for the sick and injured, the cost is far lower than it was in the old days. Doctors are victims of circumstances. They pay more for supplies of every kind. Adequate office space is ten times the cost of an office in the back end of or upstairs over a drug store. We have nothing with which to compare the equipment of a doctor's office or clinic; such things were non-existent. Houses, cars, gasoline, clothing, meats and groceries, as well as wages, common and skilled, have kept well ahead of doctors' fees in the upward spiral. This we cannot help. People expect services and fees of doctors to be commensurate with their investment. When I do have a complaint about a fee, I sometimes say to the party that if he will pay me in good money—money that will buy what it used to buy, I shall be glad to accept a smaller fee.

The medical organizations and medical schools are trying to induce young doctors to locate where there is a scarcity of services. This is well enough. But they should go in pairs for better service and satisfaction. Even then, they will see these same patients they are there to serve get up enough money and transportation to go, sometimes, long distances to another doctor or to a specialist.

The individual physician in his daily rounds is our best public relations officer.

Specialization has been constructive in bringing about better medical care. The general practitioner can properly and adequately take care of 90 percent of the needs in his community. There is nothing wrong with the public relations in a community served by general practitioners or family doctors. The family doctor is the one to whom the patient should go. He will know if and when the patient needs the help of a specialist and what kind of a specialist is needed. When the patient runs around from specialist to specialist, he thinks he has been under the care of a half dozen doctors, when in fact he has not had any. The general practitioner should hold the lines and referee the matter, correlating and coordinating, which the patient cannot do.

A man cannot be a general practitioner of medicine without being a part and parcel of his community. He need not—he should not—meddle. It is his to love, listen, advise and keep his mouth shut. In the intimate and confidential relations to which physicians are admitted, the greatest purity of character and highest standard of moral excellence are required.

Doctors are required to pass an examination and procure a certificate before they can legally practice in this state. Lawyers are licensed by graduation from the University Law School, with references and recommendations. The overhead expenses in the practice of medicine are much greater than in the practice of law. There is so much of the material a doctor must buy that is used up in the using. Books are indispensable; yet many of them are obsolete before you can get them on your shelves. Truly did the old prophet say: "Of making many books there is no end, and much study is a weariness of the flesh." Yet, if you do not like books, if you do not love to study, you will not be able to stay at the head of the profession in your community. Age does not hurt you; it is attitude that hurts.

Every man has four ages: his chronological age; his physical age; his mental age; and his temperamental age. The retirement of a teacher from a position of service should not be based solely on chronological age. We have men here whose services are as valuable or more so than ever before. Confucius said: "The superior man will ask, 'Is it right?'; the inferior man will ask, 'Will it sell?'"

I should say something about Alabama. Look at the map: it has the most beautiful outline of any state. Look at the soil, the climate, the minerals, the rivers, the crops. There is not another state like it. Others are better developed; Alabama is more exploited. Potentialities are hardly touched. Push-button agriculture and atomic energy are yet in the dream stage.

The medical organization in Alabama is unique. There is not another such organization in America or elsewhere. The State Medical Association is the State Board of Health, made so by law enacted by our State Legislature. We are charged with the duty and given the power by law to make and enforce ordinances and regulations in the

interest of public health. In spite of all this, we are human. Power goes to the head of individuals. Doctors in key places, policy makers and enforcers, become intolerant. The machine becomes a juggernaut, a Frankenstein.

I speak as a man having experience because I have had ample opportunity to study the under surface of the steam roller in medical politics in Alabama. This was a defect in administration and not a fault with the system. In spite of all this, we have the best medical organization in the world.

Our loyalty should be to principles and laws rather than to men. We would as well suffer for principles here as for our boys to be sent over yonder to make the world safe for democracy.

Let us measure up to our opportunities. Let us hold aloft the fair banner of our noble profession and not let it trail in the dust, ever bearing in mind with the poet:

“Heaven is not gained by a single bound,
But we build the ladder by which we rise
From the lowly earth to the vaulted skies,
And we mount to its summit round by round.”
Or we may read the story of:
“Abou Ben Adhem (may his tribe increase!)
Awoke one night from a deep dream of peace,
And saw, within the moonlight in his room,
Making it rich, and like a lily in bloom,
An Angel writing in a book of gold;
Exceeding peace had made Ben Adhem bold,
And to the Presence in the room he said,
“What writest thou?” The Vision raised its head,
And with a look made of all sweet accord
Answered, “The names of those who love the
Lord.”
“And is mine one?” said Abou. “Nay, not so,”
Replied the Angel. Abou spoke more low,
But cheerily still; said, “I pray thee, then,
Write me as one that loves his fellow-men.”
The Angel wrote and vanished. The next night
It came again with a great wakening light,
And showed the names whom love of God had
blessed,
And, lo! Ben Adhem’s name led all the rest!”

SURGERY OF THE STOMACH AND DUODENUM AT ST.
MARGARET’S HOSPITAL, MONTGOMERY, ALA-
BAMA DURING 1946, 1947 AND 1948

LUTHER HILL, M. D.

Montgomery, Alabama

St. Margaret’s Hospital is the largest private hospital in Central Alabama. It is located in the third largest city and draws many of its patients from the surrounding rural area. An analysis of its clinical work should give a representative picture of the quality of the professional work for the state as a whole.

The period of the report covers the years 1946, 1947 and 1948. During this time there were 24,017 hospital admissions. The records of eight-three patients are reviewed. These patients were treated by nine surgeons.

TABLE 1
RECORDS REVIEWED 1946, 1947, 1948

	Cases	Hospital Deaths
Injury to stomach	2	0
Congenital hypertrophic pyloric stenosis	14	0
Tumors of stomach	16	7
Ulcers of stomach	51	9
Total	83	16

Read before the Association in annual session, Montgomery, April 19, 1949.

INJURIES

There were two patients with injuries to the stomach, one had stab wounds and the other an acute dilatation following an automobile accident. Both made uneventful recoveries.

CONGENITAL HYPERTROPHIC PYLORIC STENOSIS

Fourteen patients with hypertrophic pyloric stenosis presented the text book picture of the disease and had the Rammstedt operation. There were no deaths.

NEOPLASMS

There were 16 patients with neoplasm of the stomach. Of these 14 had carcinoma, one fibroma and one lymphosarcoma. The patient with fibroma was a 72 year old colored male. He died from hemorrhage a few hours after admission. An autopsy revealed a large degenerated fibroma with ulceration.

The outlook in this series is certainly gloomy. One half of the number could not submit to exploration and of the eight that did have an exploration only two could be resected. The follow-up on these two pa-

TABLE 2
NEOPLASMS OF STOMACH 1946, 1947, 1948

	Cases	Hospital Deaths
Not operated upon.....	8	5
Partial gastrectomy.....	2	0
Abdominal exploration only.....	1	0
Palliative procedure.....	5	2
Total	16	7

tients reveal recurrence in both. The average age of these patients was 61 years. The youngest were 30 and 31. Gastro-enterostomies were done as palliative procedures to relieve the obstruction low in the stomach.

TABLE 3
ULCERS OF THE STOMACH AND DUODENUM
1946, 1947, 1948

	Cases	Hospital Deaths
Acute perforation.....	19	5
Penetrating ulcers.....	2	1
Chronic ulcer with pyloric obstruction.....	12	0
Bleeding ulcer.....	16	3
Marginal gastrojejunal ulcer.....	2	0
Total	51	9

PEPTIC ULCERS

The records of fifty-one patients with ulcer were reviewed. All of these patients had ulcer complications and required more treatment than a medical regimen. Approximately 20 percent of the patients were colored. There were two cases of gastro-jejunal ulcer in this group. One patient, a 42 year old white male, had a ruptured duodenal ulcer 8 years previously. Following the closure of the perforation he continued to have difficulty and submitted to a gastro-enterostomy two years later. Two years after the gastro-enterostomy his ulcer symptoms returned and persisted almost constantly during the next four years. An examination revealed a marginal gastro-jejunal ulcer. His free gastric acidity was 35 and his total 70. The gastro-enterostomy was opened and a partial gastric resection accomplished. He has been free of symptoms since.

The second patient was a 28 year old white female. She had had a gastro-enterostomy 12 years previously. At the time of her last admission she stated that her ulcer symptoms had returned 4 months previously. She was vomiting profusely and had become emaciated. Her weight at the time of ad-

mission was 78 pounds. A diagnosis of gastrojejunal ulcer was made with stenosis of the proximal loop. A partial gastric resection was done on this patient. She has remained symptom free for the 10 months since the operation.

TABLE 4
PERFORATED ULCERS 1946, 1947, 1948

	Cases	Hospital Deaths
Closure perforation only.....	12	3
Closure perforation and gastro-enterostomy.....	2	0
Partial gastric resection.....	3	1
Not operated upon.....	2	1
Total	19	5

There were five deaths in this group of perforated ulcer. For the group who died, an average of 57 hours had elapsed between the onset of symptoms and the operation. One patient was admitted in such poor condition that an operation was not attempted. The other patient who was not operated upon walled off his infection. An abscess developed under the anterior abdominal wall and was opened.

The average age of the patients with perforated ulcer was 43.

Excellent surgical judgment was demonstrated in this group. Five patients were considered adequate risks for more extensive operation than simple suture of the perforation. There was one death in this group: a patient who had perforated 3 days before admission and on whom a partial resection was done.

TABLE 5
PYLORIC OBSTRUCTION DUE TO ULCER
1946, 1947, 1948

	Cases	Hospital Deaths
Gastro-enterostomy.....	6	0
Partial resection.....	5	0
Pyloroplasty.....	1	0
Total	12	0

This group of patients having chronic ulcers with pyloric obstruction were well handled. These patients had lost weight and were in poor fluid and electrolyte balance. This undoubtedly influenced some decisions to do gastro-enterostomy in preference to resection. The average age of the patients with chronic duodenal ulcer with obstruction was 54. The youngest 43. There were three patients in the 60's.

TABLE 6
BLEEDING ULCERS 1946, 1947, 1948

	Cases	Hospital Deaths
Treated without operation	14	2
Direct attack (operation)	2	1
Total	16	3

There were 16 patients with bleeding ulcers in this group. Two of these patients died following medical treatment and transfusion. One was a colored male 47 years old who had the plasma and blood equivalent to eight pints. The other was an 85 year old patient who had an associated coronary thrombosis and died a heart death.

There was one death in a patient operated upon. The bleeding vessel was ligated and the bleeding controlled but death ensued nevertheless. The treatment of the patient with bleeding ulcer constitutes one of the most puzzling problems of surgery. It is fortunate that the majority will stop bleeding if given enough blood transfusions, rest and time. There is no way of foretelling which patient will not stop until it is almost too late to operate. The average age of all patients with bleeding ulcer was 46, the youngest 22.

TABLE 7
GASTRECTOMIES 1946, 1947, 1948

	Cases	Hospital Deaths
Tumors of stomach	2	0
Perforated ulcers	3	1
Pyloric stenosis	5	0
Bleeding ulcers	1	0
Marginal ulcer	2	0
Total	13	1

Thirteen patients had gastrectomies. There was one death in this group. The patient has been discussed with the perforated ulcer series.

The author has been impressed with the comparatively advanced age of this group of ulcer patients. The average for the perforated group was 43, the obstructed group 54, and the bleeding group 46.

SUMMARY

The records of 83 patients treated in St. Margaret's Hospital during the last three years and who had lesions of the stomach and duodenum requiring surgery are re-

viewed. The deaths are analysed and discussed. The results are commendable.

It is believed that the work is comparable to the state as a whole and is a tribute to the steady progress of medicine and surgery in Alabama.

The Syphilitic Heart—A syphilitic heart, to adopt a Hibernicism, is not a heart at all; it is an aorta. Of course, syphilis does affect the heart when there is produced a syphilitic myocarditis. Sometimes a syphilitic myocarditis crops up some years after the initial lesion, usually as a dyspnea of sudden, mysterious origin occurring in an adult somewhere around the fortieth year, who has been previously perfectly sound as to his heart. Such a sudden onset of dyspnea associated with rapid heart action in a man in the forties ought always to raise in the examiner's mind a suspicion of specific origin.

As already stated, however, a syphilitic heart is, in general, an aorta. By that we mean to say that when the spirochetes attack the cardiac mechanism, they really first attack the aorta. They seem to have a predilection for the ascending portion, though they often, of course, attack the transverse and descending portions and, indeed, any or all of the arteries of the body.

Syphilis is a great dilator. Its effect is invariably to widen the aortic arch, to produce a weakening of the aortic wall, with subsequent stretching. It is a dilator par excellence. The dilatation may be so slight as to justify merely the diagnosis of a dilated arch, or it may be great enough to merit the diagnosis of aneurysm of the fusiform type. Often it is a matter of taste with the examiner whether he shall designate a case syphilitic aortitis with dilatation, or syphilitic aortitis with aneurysm. There is no hard and fast line of demarcation between the two conditions. If the patient lives long enough, the dilatation leads to aneurysm.

When the spirochetes invade the aortic arch, they not infrequently invade also the aortic valves, and, when they do, they always adhere to their law of dilatation. Their effect upon the aortic valves is invariably to produce an aortic insufficiency. There is absolutely no such thing as syphilitic aortic stenosis. It is wholly contrary to the law of syphilitic pathology. If one has reason to suspect the existence of aortic stenosis in a case, if, for example, the criteria of Von Leube are present and the pulse is tardy and small, then probably the diagnosis is wrong and the case is one of rheumatic instead of syphilitic disease.

There is another interesting phenomenon connected with the syphilitic heart and that is the frequent association of coronary disease with syphilitic aortitis. Allbut insisted early upon the relative frequency of incipient syphilitic aortic infection in angina pectoris—*Folsom and Kelley, J. Florida M. A., August '49.*

EYE DISEASES CAUSING BLINDNESS IN THE STATE OF ALABAMA

ARTHUR F. STEINMETZ, M. D.

Birmingham, Alabama

I. CONGENITAL CATARACT

Congenital cataracts, more correctly, developmental cataracts, account for 53 of the 268 patients at the Institute for the Blind at Talladega. Developmental cataracts are those which occur at birth, at infancy, or adolescence and their cause is not entirely understood. A study of pedigrees reveals that the inheritance factor is of a dominant type, but members of the same family do not necessarily have the same types of cataracts. Some investigators have put forth the theory that a certain factor is inherited which leads to the appearance of a developmental cataract, but arrangement of chromosomes and environmental factors determine to a large extent exactly which type of cataract forms.

It is most important that developmental cataracts be operated upon at the age of six months to a year. If at this age the surgery is performed adequately in an eye which has no other abnormality, and with a spectacle lens worn, the retina will develop physiologically, and the macular function will develop so that good visual acuity can be attained. If surgery is deferred until the patient reaches the age of eight or ten, before a perfect cataract operation is done and then the correct spectacle lens fitted, the vision may be no better than ten per cent. It is therefore very urgent that every case of developmental cataract be operated upon as early as possible. In the study of the cataract cases at Talladega, it is evident that the parents have not known of this urgency and, as a result, it is not expected that the visual acuity in the majority of the cases can be improved beyond ten per cent even though the cataract removal has been successful.

Of our group of cataract patients, only 8 were operated upon when three years or younger, the ideal time for surgery. Only 6 of the 53 patients had adequate surgery, 34 had inadequate surgery in that an opening of

the secondary cataract membrane was not present in the pupil area, and 13 had no surgery. In the last mentioned group cataract surgery is now contraindicated in 5 of the cases because of degenerative changes in the eye and the development of phthisis bulbi.

The optimal time for surgery of developmental cataracts is six to twelve months for the first eye and two or three months later for the second eye. Prognosis is difficult, because there may be other congenital abnormalities of the eye which will prevent the patient from enjoying the benefits of a successful operation.

The preferred surgical technique depends upon many factors, but in general, with children seven years of age or younger, Moncrieff's technique of needling, with irrigation of the anterior chamber, is performed; on patients seven to seventeen, needling is performed and several days later the anterior chamber is irrigated of all cortical material possible; and from seventeen to twenty-five, linear extraction is performed, removing the nucleus of the lens.

A final report of the visual acuities in these cases cannot yet be made since surgery has not been completed and spectacle lenses have not been prescribed.

Of these 42 cases of operable cataracts, 23 have other congenital abnormalities of the eye. This raises the difficult question as to the optimum time for surgery in an eye that has associated ocular defects. In these specific instances surgery can be rightly delayed until the eye can better withstand the surgery. Generally speaking, however, the longer the delay before surgery after the child's first birthday, the less vision can be expected.

The above 53 cases are so diagnosed because the basic pathology for the loss of vision is cataracts. In a school for the blind usually the pathology of the eyes demands more than two diagnoses. Primary and secondary diagnoses are made, the primary diagnosis referring to the condition that is the direct cause for the loss of vision and

Read before the Association in annual session, Montgomery, April 19, 1949.

From the Department of Ophthalmology of the Medical College of Alabama.

secondary diagnoses consisting of associated defects.

II. OPTIC NERVE ATROPHY

Forty-four of the Institute's patients are blind from optic nerve atrophy, and they can be classified as:

Unknown etiology.....	19
Primary or inherited.....	11
Secondary to retinal lesions.....	6
Secondary to oxycephaly.....	2
Secondary to central nervous system:	
Meningitis.....	(3)
Poliomyelitis.....	(2)
Meningioma.....	(1) 6

In the group, Unknown Etiology, there is no history of inheritance, and no causative agent could be found in a study of the general body. Specialized examinations, such as neurological consultations and x-rays of the skull, have not as yet been done, and perhaps these may be of further value in the study of these cases. Funds are needed for the x-rays.

In the group, Primary or Inherited, four members of one family with optic nerve atrophy are presently enrolled in the Institute. Congenital optic nerve atrophy is transmitted as a dominant characteristic. In primary atrophy there is no evidence, as seen with the ophthalmoscope, of edema, congestion, exudation or hemorrhage; these are the classic findings in secondary atrophy. The most frequent causes of primary nerve atrophy are (1) central nervous system syphilis, either tabes or taboparesis; (2) breaks in the line of conduction due to tumors, hemorrhages, aneurysm; and (3) retrobulbar neuritis produced by an inflammation of the nerve posterior to the disc, demyelinating diseases, toxic amblyopias, etc.

In the group, Secondary to Retinal Lesions, studies are not yet completed because in some instances the cause of the chorioretinitis is unknown.

III. CONGENITAL GLAUCOMA

At least 5 of our patients are blind from congenital glaucoma, and it is possible that some of the cases of advanced degeneration of the eyes are due to congenital glaucoma also. This is one of our most disturbing conditions, because, with early diagnosis and prompt treatment, the vision in all of these cases probably could have been saved.

A characteristic sign of congenital glaucoma is the disproportionately large size of the cornea. As the condition progresses, steaminess or cloudiness of the cornea accompanies the increased intra-ocular pressure. The eyes are sensitive to light and the child cries and frets—meanwhile, the neighbors tell the parents what beautiful, big eyes the child has.

Barkan of San Francisco has recently shown that the stripping away of the embryonic tissue from the angle between the cornea and the iris will allow a free entrance of the aqueous fluid into the canal of Schlemm. This has changed entirely the prognosis of congenital glaucoma. If surgery is performed early (soon after corneal cloudiness occurs), the child may obtain and retain good vision for life; if the condition remains, the canal of Schlemm is obliterated, and the cloudy corneal changes progress and become permanent and the optic nerve becomes atrophic from the continued increased intra-ocular pressure.

Goniotomy is contraindicated in older children whose eyes are in an advanced stage of glaucoma. Our cases of congenital glaucoma at the Institute for the Blind fall in this age group. We have found in these enlarged eyes that the intra-ocular pressure must be reduced most gradually. The operation of choice has not been decided.

IV. ANIRIDIA

Nine cases of aniridia are present at the Institute. Clinically no iris is apparent, although, on microscopical examination, iris rudiments are usually found. Pathologically, in the region of the corneoscleral junction, there is a short stump of iris often adherent to the posterior surface of the cornea either in part or the whole of its circumference. This leads to interference with the canal of Schlemm, which, on section, appears obliterated. This condition is usually accompanied by lens abnormalities, such as cataract, ectopia lentis, and also in 5 of our cases secondary glaucoma has occurred.

In none of our cases is the visual acuity better than 20/200, or 10 per cent of normal vision.

V. SYMPATHETIC OPHTHALMIA

Five of our cases are blind because of a severe injury of one eye and the develop-

ment of sympathetic ophthalmia in the second eye. These cases are too few in number to permit generalization, and in some of these the necessary details of the past history cannot be obtained.

Following a severe eye injury, careful attention must be given both to the injured eye and to the other eye. If the iris, ciliary body or choroid is injured severely and is incarcerated in a perforating wound, conditions are ideal for sympathetic ophthalmia to develop. Sympathetic ophthalmia is essentially a bilateral uveitis or inflammation of the choroid and ciliary body. Although the typical signs of an uveitis are a pericorneal congestion, a miotic pupil and a cloudy aqueous, an associated conjunctival flush may be present and be responsible for the mistaken diagnosis of conjunctivitis. The eye, when examined by slit lamp, reveals precipitates on the back surface of the cornea, cells in the anterior chamber and in the retrolental space. The injured eye is the exciting eye and the other is the sympathizing eye. The sympathizing eye may be involved during the primary attack of the uveitis of the exciting eye, or during a subsequent attack. For this reason the incubation period of the sympathizing eye may vary from six days to many years. The treatment of sympathetic ophthalmia is removal of the exciting eye. Questionable exciting eyes should be removed. It is always difficult to make the decision, but these five children would probably have a normal eye had the injured eye been removed when the second eye presented signs of the uveitis. No age is exempt from sympathetic ophthalmia. Males are more affected than females.

VI. ALBINISM

Thirteen of our patients have albinism, 8 of these being enrolled as new students this year. The visual acuity is usually 20/200 or less. This condition is usually inherited as a recessive characteristic. The parents often do not show the defect but frequently uncles, aunts or cousins do. All sorts of transitional forms exist between complete albinism and normal pigmentation.

Neither medical nor surgical treatment is of avail in these cases, and, except for the use of shaded glasses to help the photophobia, nothing whatever can be done about them.

Albinism has been studied in great detail by geneticists, and many theories concerning its development have been advanced. Waardenburg recognizes seven types of albinism, as follows:

1. Universal albinism: The individual is totally deficient in pigment and shows underdevelopment of the macula and secondary nystagmus.

2. Incomplete universal albinism: The patient is poor in pigment though this is not totally absent. The macula is underdeveloped though there is not in all cases nystagmus.

3. Isolated eye or fundus albinism: The general pigmentation is normal, the eyes alone being deficient in pigment. Sometimes the iris is involved and sometimes the fundus. The macula is underdeveloped. This type is sex linked recessive.

4. Aplasia or hypoplasia of the macula with or without deficient fundus pigmentation.

5. Aplasia or hypoplasia of the macula and the periphery of the retina with night blindness and diminution of the visual field.

6. Nystagmus with high myopia and poor visual acuity but with normal pigmentation. This is a dominant trait.

7. Primary hereditary nystagmus without defective macula or albinism.

The diagnosis of pronounced universal or incomplete universal albinism presents no difficulties. However, in diagnosing aplasia or hypoplasia without deficient pigmentation, controversy arises.

VII. ANOPHTHALMIA

In anophthalmia, not even a vestige of an eye can be found in the orbit. In the examination, it is sometimes extremely difficult to distinguish between a true anophthalmia and an extreme degree of microphthalmia. Three cases of anophthalmia are present at the Institute and 2 of these are sisters. In these cases, prolonged wearing of special conformers and possibly plastic surgery will be required for construction of a socket for the wearing of a prosthesis. The insertion of a small plastic conformer or an artificial eye during the first few months of life and then worn continuously would result in sockets suitable for the wearing of a prosthesis.

Ida Mann gives three classifications of anophthalmia: (1) primary, (2) secondary, and (3) consecutive or degenerative.

In primary anophthalmia the single originating fault is a failure of the optic pit to deepen and form an optic outgrowth from the forebrain.

In secondary anophthalmia there is a complete suppression or abnormality of the forebrain so that the absence of the eyes is consequent on the whole region to which they are related. The consecutive type is a condition in which an optic vesicle had formed and had subsequently degenerated and completely disappeared.

In primary anophthalmia the orbit, eyelids, lacrimal apparatus, conjunctival sac, extrinsic ocular muscles and their nerves are all present. The lacrimal gland is present and tears issue from the conjunctival sac when the child cries.

The remainder of the diseases at the Institute for the Blind are presented in statistical form.

Affections of the cornea, not specified	2
Affections of the cornea, specified	5
Affections of the choroid and retina, not specified	1
Affections of the eyeball, not specified	1
Amblyopia ex anopsia	5
Amblyopia, undefined	3
Chorioretinitis	5
Coloboma	4
Degenerative changes, not specified	1
Detached retina	3
Disorganized atrophic phthisical eyes	19
Structural anomalies of the eyeball, specified	1
Exotropia, alternating	1
Hypertension	6
Iridocyclitis	2
Keratitis, interstitial	9
Keratitis, not specified	2
Keratitis, ulcerative	2
Kerato-iritis	3
Microphthalmos	10
Pannus	2
Refractive errors, specified	9
Retinal degenerations	10

It is evident, in considering the above diagnoses, that some diseases are preventable, some can be improved, some can be controlled, and a percentage of inherited diseases have to be accepted. Cases of blindness resulting from congenital glaucoma and sympathetic ophthalmia belong to the preventable group. To accomplish this goal early diagnosis and treatment are necessary. The surgical methods of treating de-

velopmental cataracts have improved, and cases should be referred for surgery at the age of one year. In inherited diseases, the family physician, through his knowledge of the laws of genetics and advice to parents, plays an important role in reducing these diseases of the eye.

Studies on a national scale have shown that students with a vision between 20/200 and 20/70 should be trained in the partially sighted classes, or sight-saving classes. During the last year this has been set up at Talladega. Previously this group of students was taught braille, but now use specially designed books with large print, bulletin typewriters, etc. There are now 50 students in the sight-saving classes. It is obvious that the Talladega Institute cannot take care of all of the partially sighted students throughout the state, and it is to be hoped that regional sight-saving instruction will be given.

At the Institute, under the present system, applicants must be examined by the ophthalmologist. If vision is better than the requirements of the school for the blind or sight-saving school or if the applicant shows no evidence of having an eye condition that may lead to blindness, then that applicant is referred to a public school. When accepted, each patient is examined ophthalmologically and recommendations made, if surgery, treatment or glasses are necessary. Many patients in a school for the blind require observation at frequent intervals. A member of the Eye Department of the Medical College of Alabama has been spending two days a week at the Institute. During the last year, 18 pupils have been returned to public schools and the above stated number transferred to sight-saving school.

Ideal care is not as yet being given the student at the Institute. Diseases of the eye which lead to blindness should be recognized before the school age. These can only be detected through the coordinated efforts of the physician, public health officer, social service worker and the Institute for the Blind. Treatment should be instituted during the preschool age. If treatment is not available, these cases should be reported to and cared for by the Institute. A financial investment made by the state will pay big dividends.

Hospitalization for surgery, special laboratory examinations, and the purchasing

of prostheses and spectacles have been delayed because of the lack of finance. It is hoped that a legislative appropriation will furnish the necessary funds, not only for the relief of human suffering but also because the prevention of blindness is good business, and money spent for this prevention is money saved later in life in the form of pensions.

Education of the general public regarding the prevention of blindness produced through systemic disease, local infections of the eye, accidents to the eye and inherited diseases should comprise an active phase of the program of the Institute.

In this first paper of the Department of Ophthalmology of the Medical College of Alabama, we report progress. In future papers in presenting this work of the Department, it is desired that further advancement approaching ideal care for the students at the Institute for the Blind can be made known.

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A roentgenographically normal chest in a person over 40 does not eliminate the possibility of pulmonary tuberculosis developing in the future. Incipient pulmonary tuberculosis in persons over 40 may be much more common than is generally supposed.—Aaron D. Chaves, M. D., *Am. Rev. Tuberc.*, May 1949.

Treatment for Low Back Pain—Methods of treatment for low back and sciatic pain are governed by the factors already described. Great strides have been made in the treatment of this common disability since the surgical efforts of Mixter and Barr. Over a period of several years we have used diverse methods of conservative or non-operative treatment. These include back braces, physiotherapy (infra-red and diathermy), corrective arch supports, lifts under the heels, application of plaster jackets in the forward-flexed position, manipulation, and traction in recumbency. We have manipulated backs under general anesthesia with or without the application of a plaster jacket. Occasionally manipulation and stretching under anesthesia will result in a peroneal nerve palsy due to further protrusion of the herniating mass. Injection of the nerve roots with procaine and pure ethyl alcohol may lead to disaster. The most universally satisfactory method of conservative treatment in our hands has been traction applied to both extremities, with the patient in a recumbent position on a hard mattress, the so-called Buck's extension. According to the pathology noted at operation, the latter seems to be the preferable method in the treatment of the non-operative cases. Disc symptoms are intermittent in nature. Disappearance of these symptoms is probably due to a retrogression of the nucleus into the confines of the annulus fibrosus, or to release of the scar contracture of the nerve roots produced by the impinging mass; or it may be due to a spontaneous abatement of the inflammatory edema of the roots when the threatening mass of the disc retracts. Recumbency and traction will definitely assist these mechanisms. When the acute symptoms subside, a back support in the form of a flexion jacket or brace should be applied.

The operative treatment of disc pathology presents complex problems. The acute, routine herniated nucleus pulposus seldom offers any particular difficulty for almost always the disc pathology is quickly located and easily removed. The operative technic has been adequately described elsewhere. Difficult problems arise in those patients who have enough pain to warrant operation yet in whom the clinical findings are not typical of a disc disorder. Frequently we explore the fourth and fifth intervertebral levels and find nothing to explain the symptoms, no nerve root pressure within the spinal canal itself and no concealed disc. It then becomes necessary to explore the foramen. This is done by cutting away the overhang of the articular process and exposing the ostium of the foraminal canal. We do not hesitate to do this at either or both the fourth and fifth lumbar spaces. The latter does not always reveal sufficient pathology to account for the symptoms. We have frequently found root pressure within the foraminal canal.

When it is observed that the nerve root compression is caused by collapse of the disc space and subsequent approximation of the pedicles, we gouge out the portion of the pedicles involved and perform a complete foraminotomy.—Keats, *J. M. Soc. New Jersey*, Aug. '49.

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POSTGRADUATE MEDICAL ASSEMBLY

The Nashville Academy of Medicine will hold its second annual postgraduate medical assembly in Nashville on October 5, 6, 1949.

Papers will be read by twelve out-of-state essayists on timely subjects in the field of obstetrics, pediatrics, eye, ear, nose and throat, orthopedics, urology, plastic surgery, radiology, endocrinology and gynecology.

Luncheon roundtable discussions on both days will be a feature of the assembly.

The assembly affords members of the American Academy of General Practice an opportunity to secure approximately 12 hours of postgraduate credit.

Three hundred seventeen (317) registered for the Academy's first assembly last year, and 500 are expected to attend the coming meeting.

Physicians in Alabama will receive personal invitations to attend.

TREATMENT OF MIGRAINE

"Various remedies have been suggested and used in the treatment of the acute migraine attack. Because of this, it can be realized readily that none of them has been particularly successful. Ergotamine tartrate by the hypodermic and oral routes, histamine, sedation, purging with mag-

nesium citrate or sulfate and various headache capsules consisting of acetylsalicylic acid, acetphenetidin, caffeine and codeine have been used. Of all these, ergotamine tartrate has probably been the most widely and successfully used agent to date. Its action is that of stimulating the sympathetic motor nerve endings and resultantly causing an increase in blood pressure; this feature prohibits its being used in patients with arterial disease or significant hypertension. Another objection to its use is that it frequently makes the patient nauseated; this is so pronounced in some individuals that on occasion patients state that even though the migraine headaches are very severe, they prefer them to the after-effects of ergotamine tartrate. Further, it has been estimated that approximately only 40 per cent of the patients with migraine obtain relief from the administration of ergotamine. Another agent which has afforded some relief is histamine; the major objection to its use is its effectiveness in only a small percentage of patients. This, of course, has been the outstanding deficiency of all of the aforementioned methods of treatment. The headache mixture capsules have been equally ineffective, but, except when codeine has been included, these have been much less harmful than the narcotics. All the narcotics have been administered, without any benefit in a large number of instances; moreover, this practice is to be strongly condemned because of the possibility of addiction."

Thus does Grenfell¹ begin his discussion of treatment of migraine with nicotinic acid. The Mississippi observer goes on to state that "upon the premise that migraine might be due to a temporarily insufficient blood supply, intravenous nicotinic acid injections were given to create a dilatation of the blood vessels. These patients were selected for treatment only if one or more of the other previously mentioned methods had been totally or partly ineffective."

All of the fifteen patients were sufferers from true or typical migraine and Grenfell reports that "in no instance was a flushing not produced"; also that "in no instance were any toxic effects noted. No rise in blood

1. Grenfell, Raymond F.: Treatment of Migraine with Nicotinic Acid, A. M. Practitioner 3: 542 (May) 1949.

pressure or pulse rate was observed in any of the patients. Although the nicotinic acid did produce uncomfortable sensations of tingling and burning of the skin and a pronounced flushing, no patient objected strenuously to the treatment; in no instance did the headache become more severe. Moreover, with the disappearance of the headache, nausea also left the patient."

And, in conclusion, the author says that "in 15 patients suffering with true migraine, nicotinic acid was administered intravenously a total of 31 times. This form of therapy was successful in 13 patients and caused no toxic manifestations in any of them. Because no increase in blood pressure or pulse rate resulted, it appears possible to use this drug even in the presence of cardiac pathology and hypertension. Thus, additional evidence is presented showing nicotinic acid to be a safe, simple means of treating the acute attack of migraine. No attempt is made in this paper to consider the prevention of migraine attacks."

It is to be hoped that the results obtained by Grenfell can be confirmed and extended by other observers. So great is the agony occasioned by migraine that the unfortunate victims become willing to try almost any measure that promises even a little relief. And the harassed doctor is sometimes tempted to yield to the patient's pleas for relief even though he may be dubious as to the efficacy of the measures advocated. While it is to be hoped that nicotinic acid may prove to be a great aid in the treatment of migraine, all seasoned practitioners will withhold judgment until much more time has passed and nicotinic acid will have been tried upon a very large scale. For far too many alleged remedies have been introduced and widely proclaimed in the treatment of migraine and sooner or later the vast majority have been discarded as being completely worthless.

BIOGRAPHY OF GENERAL GORGAS

Physicians and other admirers of General William C. Gorgas will be interested in the impending publication of a new biography of the world-famous Alabamian.

The book, tentatively titled "Physician to the World," will be published by Duke University Press. It was written by John M. Gibson, Director of the Division of Public

Health Education of the State Department of Health.

SYMPOSIUM ON PLASMA PROTEINS

A symposium on plasma proteins will be given under the auspices of the University of Illinois College of Medicine and sponsored by the Robert Gould Research Foundation on Friday and Saturday, Sept. 23 and 24, in Chicago.

Dr. John B. Youmans, dean of the University of Illinois College of Medicine, said that the symposium is designed to promote research and understanding of the subject.

Sixteen prominent speakers will present various aspects of the plasma proteins, such as formation, fractionation, immunological and endocrine relationships, hypoproteinemia, relation to edema, isotope tracer studies, relation to the liver, and related subjects.

Speakers include Dr. John L. Oncley, Harvard University; Dr. S. Howard Armstrong, Jr., University of Illinois; Dr. S. C. Madden, Associated Universities, Inc.; Dr. David Shemin and Dr. Irving M. London, Columbia University; Prof. Bacon F. Chow, Johns Hopkins University; Dr. James B. Allison, Rutgers University; Dr. Robert Elman, Washington University; Dr. Fuller Albright, Harvard University; Dr. Hugues Gounelle, Paris, France; Dr. Karl Dittmer, University of Florida; Prof. Philip P. Cohen, University of Wisconsin; Dr. Paul R. Cannon, University of Chicago; Dr. Abraham White, University of California; and Dr. Charles S. Davidson, Boston, Mass., City Hospital.

One hundred seventy-five guests who are vitally interested in the subject have been invited to attend the symposium. Sessions will be held at the University of Illinois College of Medicine.

The Robert Gould Research Foundation of Cincinnati, O., is a non-profit institution whose activities are dedicated to public health and welfare. At the present time, the Foundation is devoting its funds primarily to the support of scientific research in the field of animal and human nutrition.

The symposium on plasma proteins will be the second sponsored by the Foundation. In October 1947, it supported a Symposium on Nutritional Anemia which was given under the auspices of the University of Cincinnati College of Medicine.

MULTIPLE SCLEROSIS

Persons afflicted with multiple sclerosis are not inevitably doomed to early invalidism or an untimely death as is commonly supposed by both lay and professional persons, according to Dr. Tracy J. Putnam, chief and attending neuro-surgeon, Cedars of Lebanon Hospital, Los Angeles, Calif.

Dr. Putnam states in his article in a recent issue of the Crippled Child Magazine, published by the National Society for Crippled Children and Adults, that "life expectancy is but slightly shortened by multiple sclerosis."

About 40 per cent of the 250,000 persons in the United States afflicted with this most common of the degenerative diseases of the nervous system are able to continue working. "Some improvement occurs spontaneously in almost 50 per cent of fresh symptoms," Dr. Putnam states.

"Common symptoms of this disease, which chiefly afflicts young adults, include spastic weakness of the arms or legs, blindness, double vision, staggering tremors, incontinence of urine and pain," according to Dr. Putnam.

One phase of the treatment discussed by Dr. Putnam is based on the common knowledge that multiple sclerosis is rarest in China and most common in Scotland. This example of accelerated incidence in cold, damp climates leads doctors to move patients to warm, dry climates when possible.

"Medicines to decrease the power of the blood to coagulate, thus decreasing the likelihood of formation of clots in the brain and spinal cord," are administered in some cases, according to Dr. Putnam.

Personal experience in treating this disease has led Dr. Putnam to recommend vigorous physical therapy rather than confinement to bed. Except in the most acute phases of the disease, confinement to bed only tends to produce invalidism, incapacity and prolonged disability, he says.

"Each case must be considered individually; there is no universally applicable treatment," Dr. Putnam says. "The situation is hopeless, however, only if we think so."

NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The National Gastroenterological Association will hold its 14th scientific session at

the Somerset in Boston, Mass. on October 24-26, 1949.

Among the outstanding speakers to present papers at the convention are Dr. Owen H. Wangenstein, Professor of Surgery, University of Minnesota Medical School, Dr. Frank Lahey, Lahey Clinic, Boston, Mass., Dr. William B. Castle, Boston, Mass., Dr. George Crile, Jr., Cleveland, Ohio, Dr. Maxwell Finland, Boston, Mass., Dr. J. M. T. Finney, Jr., Baltimore, Md. and Lord Alfred Webb-Johnson, President of the Royal College of Surgeons, London, England, who will be a guest of honor at the banquet to be held on Tuesday evening, October 25, 1949.

At the annual banquet to be held at the Somerset, the winner of the National Gastroenterological Association's 1949 prize award contest for the best unpublished contribution on gastroenterology or an allied subject will receive the prize of \$100.00 and a certificate of merit.

Immediately following the convention on October 27, 28, 29, 1949, the Association is sponsoring a course in gastrointestinal surgery at the Boston City Hospital.

Further information concerning the program and details of the course may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

X-RAY PROGRAM UNCOVERS TUMORS

Mass x-raying of chests is resulting in the finding of an increasing number of solitary tumors, according to Dr. Robert K. Arbuckle of Oakland, California.

Doctor Arbuckle, associated with the Samuel Merritt Hospital in Oakland, makes this comment in the July issue of the American Journal of Roentgenology and Radium Therapy. He presents a report of a study undertaken to determine which of the diagnostic procedures offer the most help in arriving at an exact diagnosis in patients with a single tumor of the chest.

Fifty proved cases are reviewed. Most of the tumors were of three types: (a) bronchial carcinomas; (b) nerve tissue tumors, and (c) aneurysms.

"Intelligent management of patients having solitary tumors of this kind, many of which were asymptomatic, depends upon the exact nature of the mass," Doctor Arbuckle says. "It is a great advantage to be

able to establish the diagnosis promptly so that the therapeutic measures can be planned and carried out without delay."

He points out the difficulty of making an accurate diagnosis by roentgenoscopy even for competent roentgenologists. He adds:

"Needle aspiration under roentgenoscopic guidance for the purpose of producing material for histopathologic study afforded us the most prompt and accurate method of establishing the diagnosis (74 per cent of the cases).

"There are no roentgen findings that can be considered characteristic of any particular type of tumor. In many instances the diagnosis which was finally established was not considered among the possibilities when the first examination was made."

INTERNATIONAL COLLEGE OF SURGEONS

The International College of Surgeons, United States Chapter, will hold its fourteenth annual assembly and convocation in Atlantic City, New Jersey, November 7, 8, 9, 10, 11, 12, 1949, according to David B. Allman, M. D., Atlantic City, chairman of the assembly.

The program will include scientific sessions on subjects in the fields of general surgery; eye, ear, nose and throat surgery; gynecology and obstetrics; urology; and orthopedic, thoracic, plastic and neurological surgery, as well as special surgical clinics held in Philadelphia hospitals on November 7. In addition, an extensive technical and scientific exhibit will be presented by leading manufacturers of surgical instruments, x-ray apparatus, operating room and hospital equipment, pharmaceuticals and others, Dr. Allman said. Special entertainment for the doctors' ladies has been planned.

Arnold S. Jackson, M. D., Secretary of the United States Chapter, has reported from Madison, Wisconsin, that over 500 surgeons will be received as Associates and Fellows of the International College at the convocation to be held in Convention Hall, Atlantic City, on November 10.

All doctors of medicine interested in surgery and its advancement are invited to attend, and can obtain a program upon request to Arnold S. Jackson, M. D., Secretary, Jackson Clinic, Madison 4, Wisconsin. For hotel reservations, contact E. D. Parrish, Haddon Hall, Atlantic City, New Jersey.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

BUT IT IS NOT TRUE

W. A. Dozier, Jr.
Director of Public Relations

Perhaps it is retrogression to think back to childhood days when facts were so simple. Especially simple were the matters of truth and falsification. The two were separate and distinct, one white, the other black; and there was no in between zone of grey. This, at least, was the way it looked to a child's mind and so was it to the minds of parents. Would that such were true now! The present method of winning favor of the public so very often seems to be a matter of hitting this grey area that allows a statement to be true but at the same time fails to tell the whole story. This is the method used by too many people who are trying to socialize this nation.

We certainly have many classic examples of such a method in the propaganda used by those who are pushing for socialized medicine. The draft figures, with which we are all familiar, were used as an argument in favor of national compulsory health insurance until it was pointed out that these figures were not reliable as a measure for such a scheme—true so far as they went but false in that only a part of the story was told. Under such circumstances the result was to place the statement over in the area of black falsification.

Look also at the use the Federal Security Administrator made of his "325,000 needless deaths." If he meant we did not need those deaths to make us happy or more prosperous, he was correct. However, when we look at the situation in the light intended and when we look at the facts behind these figures,

we see again that only a part of the story has been told. In fact to go even further, it is a matter of Congressional Record that objection has been raised to the use made of the National Health Assembly's recommendations in this same report to the President. Still these figures are used authoritatively and are not explained. Neither are they questioned by many people.

The latest example to come to hand is the letter used by the Committee for the Nation's Health to get support for President Truman's Reorganization Plan Number One. This letter says: "... This is proposed by President Truman on the recommendation of the Hoover Commission, and has long been needed. Mr. Hoover has personally advocated it." The "it" in the last sentence refers, as does the "this" in the former sentence, to a Department of Welfare. At no place in the letter is any statement made which tells that the Hoover Commission did

not recommend that health activities be subjugated to a Department of Welfare. The only allusion to such is found farther down in the letter where one finds: "... Tell them if they favor a separate Department of Health, they can take that up later. The Department of Welfare need not and should not hinge on this question." In this letter, as elsewhere, only a part of the story is told and this part is told so as to put medicine in a poor light.

Why this long tirade against half truths? Is it just that I want to preach a bit? Absolutely not! These above examples are concrete instances of the type of thing that you and the general public are up against. We can see from this just what our job is. Eternal vigilance must be practiced, and we must always keep telling the full story to the public. The public is fair minded and will not approve of these half truths once they are pointed out.

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STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

MEDICAL SCIENCE AND POLIOMYELITIS

Poliomyelitis is still causing considerable anxiety to Alabama parents. It is proving especially troublesome in Montgomery County. It is well, therefore, to consider some aspects to the poliomyelitis problems that were not covered in recent releases on this disease.

Our doctors and public health workers would feel better about the eventual outcome of the present Alabama outbreak if they knew more about the disease itself. They feel a particularly great need for more knowledge and for more definite knowledge regarding the manner of its transmission. How does the polio virus get from one person who has it to someone else? What needs to be done to prevent that transmission? Specifically, how can that channel of infection be effectively blocked?

The simple truth is that they do not have the answers to these and other pertinent questions. Do mosquitoes play a part in the present outbreak and in others? Different authorities have different opinions. But that is all. These troublesome insects, which have been definitely incriminated as villains in other disease crimes, have long been under suspicion as factors in the prevalence of polio. But it has not yet been possible to pin guilt upon them. The same is true of other possible factors.

One important truth has certainly been unearthed by the polio fact-seekers: Many

people have the disease without becoming sick. Indeed many have it without even knowing or suspecting the virus has entered their bodies. There is reason to believe that these unknown polio victims—if a perfectly well person can be called a victim—are entirely capable of giving the disease to others. There is sound basis for this theory. For people who have no reason to think they have ever had typhoid can give this disease to their associates. They not only can but do, as the notorious and tragic Typhoid Mary proved time and time again. The same is true of people who have had mild cases of yellow fever and a number of other diseases.

The search for poliomyelitis' hidden secrets has also revealed another significant fact: The disease seems to follow the tide of human travel. From this, authorities have been inclined to believe that close physical association with its victims is an important factor in its spread.

And what about polluted water? Do sewage and other human wastes play a part in your or your child's chances of contracting polio? How do epidemics spread? And how rapidly? Why does this virus, one of the hardiest of living things, all but die out in cold weather, only to cause the disease to blaze up to epidemic size when the weather turns warm? These are just a few of the still-unanswered questions about polio. But progress is being made in getting them answered.

Another tidbit of truth polio researchers have unearthed may eventually light up

one or more of the dark corners. It is this: that polio epidemics have a tendency to appear at about the same place about every four to six years. Here in Alabama, for example, there have been only three years in the past quarter-century (and perhaps in the state's history) in which reported polio cases exceeded 250. They were 1936 (when there were 391), 1941 (when reported cases numbered 871) and 1946 (when 378 cases were added to the epidemiologic records). There were five years between 1936 and 1941 and the same period between 1941 and 1946. However, remember this: This cyclical recurrence of epidemic conditions is not a dependable method of prophesying. There are exceptions. So do not think you are safe from an outbreak simply because only two or three years have passed since the most recent one.

The year immediately following an epidemic year normally is a non-epidemic year. One theory is that an epidemic brings the disease to many of those who are susceptible to it and that, after it ends, there is a relative scarcity of material for another outbreak to feed upon. North Carolina gives a good example of this: It experienced one of the worst epidemics ever known in any state last year. This year comparatively few cases have been reported. But here again there are enough exceptions to weaken the rule drastically: Take Texas, for instance. It also experienced a serious polio epidemic last year. And another one is under way there this year. However, it is largely concentrated in areas that were not heavily hit last year.

And how about resistance to polio virus?

Experience has shown that many people have a great deal of it. (The many who receive the virus into their bodies without developing the disease probably owe their good fortune to their resistance.) But of what does resistance consist? Is it the same thing that makes it possible for certain fortunate people to escape other diseases to which they are exposed? Is it what enables a certain person to go through the winter without getting a bad cold, although others are coughing and sneezing all around him? Is it what causes millions to work and play with tuberculosis victims for years without ever having tuberculosis?

There again, we have little knowledge. But one fact has stood out in every epi-

demio: Being in apparently sound physical condition seems to offer no defense against polio. Children who are anemic and run-down get the disease. But so do those who are the picture of health. Among the youngsters whom it strikes down are the sons and daughters of the wealthy, as well as of those in comparatively poor circumstances.

What part does diet play in one's chances of getting, or avoiding polio? We have no dependable answer to this question as far as humans are concerned. However, some experiments with mice may indicate progress toward an answer. For these tests showed that mice deprived of vitamin B₁ (the vitamin needed for healthy nerves) showed an unusual degree of resistance to the invading polio virus. But this result has not been repeated in tests on humans: People deficient in vitamin B₁ do not seem to be any safer from polio than those having it in normal amounts.

Alton L. Blakeslee, science writer for the Associated Press, tells about one of the significant changes in the polio picture in his recently published booklet. You may have seen it. It is titled, optimistically enough, "Polio Can Be Conquered." Issued by the Public Affairs Committee, a non-profit organization, it tells much of what medical science has been doing recently in its effort to subjugate this dangerous disease enemy. Concerning the change just mentioned, Mr. Blakeslee wrote:

"In the past, polio claimed most of its victims among children under five years of age. But now this pattern is changing. The disease is affecting more children over five, more teen-agers, and more young adults. Among adults, it is becoming a little more common among housewives than it was ten to twenty years ago. This change in age groups affected is so marked that the disease really should be called polio rather than infantile paralysis."

The trend which Mr. Blakeslee mentioned does not appear to have affected the polio situation in this state, however. Fifty of the 99 cases reported in 1938 were among youngsters under five. That was almost exactly 50 per cent. Of the 206 cases reported last year (1948), 115, or nearly 56 per cent, involved Alabamians of that age group. Possibly time will bring an increase in the relative prevalence among older people in this state too.

As pointed out in an earlier paper in this series, medical scientists are not inclined to

regard polio as a single-disease condition. They tend to regard it instead as a group of diseases. In that, it is like heart disease, which includes several different types of ailments affecting the heart. The composite condition known as polio is believed to be caused by, not one but several related viruses.

Mr. Blakeslee calls attention to this trend in medical thinking in the booklet which has already been referred to. He also attempts to evaluate its significance. He says:

"This may explain some of the strange differences that show up from year to year in polio epidemics. Sometimes the virus attack is more virulent, more vicious. One 'cousin' in this family may affect the muscles of the arms and legs more than it affects muscles of other parts of the body. Another 'cousin' in this mysterious family may prefer nerve cells governing muscles of the abdomen, the chest, and respiration. In laboratory experiments, animals inoculated with one of the known strains of virus will get primarily paralysis of the forelegs. This is the Lansing strain—named after the virus recovered from a patient who died in Lansing, Michigan. Another strain of the virus affects predominantly the hind legs of laboratory animals. This is the Brunhilde virus, named after a chimpanzee which served in one of the myriad research projects seeking answers to this disease. Whether these two viruses may act in this way in humans is not yet known. There may well be different strains or types of viruses that have a preference for different nerve cells.

"We know there are differences in the incubation time of the disease—the time between an exposure to the virus and the appearance of symptoms. In humans this incubation period varies from four or five days to five weeks. This difference also may be due to different kinds of virus and the individual's resistance.

"One theory is that there are different strains of the virus in different parts of the world. This may explain why soldiers going to a foreign land could contract the disease. They might have had immunity to the type of virus they met at home. It could also explain why epidemics suddenly break out in countries which have not had them before. The reason could be the introduction of a new strain of virus."

This discussion of the possibilities involving different types of polio virus might go on indefinitely. It is all speculation. But it shows what our medical leaders are thinking about, polio-wise.

And they have been working, as well as thinking. There is good reason to believe that considerable headway has been made in the effort to give people everywhere the

same kind of immunization against polio that they now have against certain other diseases. A measure of such protection has been given to monkeys in laboratory experiments, but it protects only against the strain represented by the experimental vaccine. That is, monkeys receiving a certain kind of vaccine have been rendered immune to the strain of polio from which the vaccine was made. When inoculated with viruses of other polio strains, however, they were found to be as defenseless against this invasion as if they had not received any vaccination at all. Naturally, there is no hope of protecting humans against the whole field of polio infection until successful tests of this kind have been made on lower animals.

There is yet, of course, no drug that can be used with success against polio after it develops. But here again progress is being made. We have reason to hope for ultimate success in this important field.

Meanwhile, the immediate outlook for the polio patient is much brighter than it was even a few years ago. Lighter, more efficient respirators, or "iron lungs," are now being manufactured experimentally from canvas. The use of weights to restore usefulness to nerves is undergoing considerable study and experiment. Electrical stimulation of the phrenic nerves is being tried. This, it is hoped, will be of considerable help in restoring the functioning of the muscles used in breathing.

All in all, the short-time and distant outlook for the polio victim is bright. All of us should do everything we can to hasten the day when this frightful disease will be effectively subjugated.

In the entire United States about 270,000 mental patients are coming back into the community each year. The spread of the disease from those who may have contracted tuberculosis while in mental hospitals therefore becomes a community problem which we cannot afford to ignore.—Robert J. Anderson, M. D., *Pub. Health Rep.*, Jan. 7, 1949.

The incipient lesion of pulmonary tuberculosis of limited extent is practically always of unstable character and that in a large proportion of the cases it progresses to advanced and destructive disease. There is reason to believe that the majority of cases of manifest clinical tuberculosis have their origin in these seemingly inconspicuous, small lesions.—David Reisner, M. D., *Am. Rev. Tuber.*, March 1948.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

JULY 1949

Examinations for diphtheria bacilli and Vincent's	217
Agglutination tests (typhoid, Brill's and undulant fever)	1,522
Typhoid cultures (blood, feces and urine) ..	572
Examinations for malaria	880
Examinations for intestinal parasites	3,595
Serologic tests for syphilis (blood and spinal fluid)	24,549
Darkfield examinations	7
Examinations for gonococci	2,140
Examinations for tubercle bacilli	2,869
Examinations for meningococci	1
Examinations for Negri bodies (microscopic)	95
Water examinations	1,558
Milk and dairy products examinations	4,359
Miscellaneous	268
Total	42,632

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	June	July	E. E.* July
Typhoid	8	5	24
Typhus	14	20	36
Malaria	16	17	433
Smallpox	0	0	0
Measles	428	149	124
Scarlet fever	21	22	31
Whooping cough	38	75	152
Diphtheria	7	16	16
Influenza	68	18	27
Mumps	108	92	62
Poliomyelitis	21	62	22
Encephalitis	0	0	1
Chickenpox	73	16	13
Tetanus	4	2	4
Tuberculosis	169	194	261
Pellagra	3	1	7
Meningitis	5	5	11
Pneumonia	118	96	107
Syphilis	1356	1149	1319
Chancroid	24	20	14
Gonorrhea	451	531	613
Tularemia	1	0	1
Undulant fever	7	1	9
Amebic dysentery	5	0	1
Cancer	339	318	252
Rabies—Human cases	0	0	0
Positive animal heads	27	25	0

As reported by physicians and including deaths not reported as cases.
*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

WHAT PRICE RURAL TYPHUS CONTROL

Contributed by

G. R. Wright, M. S. E.

Prin. San. and Pub. Health Eng.

A total of 7,654 cases of endemic typhus (Brill's) fever has been reported in Ala-

bama since the first eleven cases were recognized in 1922. Our records show that Dr. K. F. Maxcy of the U. S. Public Health Service, on duty in this state at that time, and Dr. L. C. Havens, Director of the State Laboratories, made a detailed study of the disease and reached certain conclusions regarding its means of transmission. The basic concepts of this original work have been accepted, following verification by laboratory and field experiments. In spite of various other implications, the rat has been regarded for many years as the reservoir of infection with the oriental rat flea, *Xenopsylla cheopis*, as the transmitting agent. Every conceivable method and combinations of proposed solutions have been employed at one time or another in an effort to control the rat and thereby provide an effective and efficient guide that would lead to reduction and possibly complete elimination of typhus. It was not until 1945 that DDT (dichlorodiphenyl trichloroethane) powder was used as a specific agent against the flea in attempting to break the chain of transmission from rat to flea to man.

If a chart showing the number of cases reported by years is observed, it will be evident that in 1933 a major peak was reached when 823 cases, including 35 deaths, were reported; and again in 1944 when 892 cases, with 47 deaths, were recorded. In each instance there followed a remarkable reduction, with 292 cases in 1935 and 191 cases with 16 deaths in 1947. One might be justified in concluding that typhus occurs in cycles of approximately 10 to 12 years. Because of the many influencing factors which apparently affect the host, transmitter and victim, in addition to the probability involved with regard to the necessity for man's direct contact with the crushed body or fecal matter of a specific infected flea, this assumption cannot be disregarded.

Although 85 percent of these cases have occurred in the southern part of the state, in the established typhus area, many cases have been reported from the entire 67 counties. Geographically then, typhus knows no bounds but is quite dependent upon climate and industry for its support and therefore flourishes in our southern farming sections where peanuts and pecans predominate. Strictly rural sections are involved as well as the urban areas and typhus control can

no longer be attempted successfully in certain localities by relying on exterminating campaigns that are confined to the city limits.

It is significant to note that in an area where approximately 40 percent of the total population is comprised of Negroes that less than ten percent have been affected by the disease.

If it may be assumed that the reduction in typhus fever since 1946 might be attributed to the DDT dusting and extermination program that was inaugurated in 1945, developed to such an extent as to include almost every typhus focus in 1946 and operated continuously to date, certain information could be presented that would lead to definite conclusions regarding the cost of typhus control in a rural area. Records that have been maintained over a period of almost five years, involving the treatment of approximately 400,000 premises (farms, residences or business establishments), have been used as a basis for arriving at the following estimates.

Our definition of the requirements for a complete treatment includes adequate supervision, transportation, application of DDT powder for flea elimination, and preparation and distribution of poisoning and gassing material for rat extermination. The total cost for one complete service for the average rural home, including outbuildings, on a large scale program is approximately \$1.25 and a city premise is approximately \$0.90. If the DDT dusting operation is omitted, a reduction of 30 to 40 per cent should be made in preparing an estimate for both urban and rural homes. Another method of arriving at the cost of a rat extermination program by expressing 10 per cent of the population in dollars may be used for comparison and has been found to be reliable. In any instance the existing conditions pertinent to rat control must be thoroughly investigated. The cost of promotional activities that would be required to establish this type of program has not been included in the above figures.

In planning for perpetuation of the present program and inauguration of additional ones, the two basic principles of individual initiative and responsibility and promotion of industrial concerns have not been overlooked. Arsenic water, costing less than

twenty-five cents a quart, has been prepared and distributed by health department personnel. The results obtained from the proper use of this poison by the individual user is an adequate demonstration of its acceptance and results. Our records show that over 80,000 pints of arsenic water have been released since 1945. Cyanogas, A-dust, a highly toxic gas that may be applied to the rat burrows, cribs, etc., by using a foot pump that is simple in design and operation, is another expedient that has been used by trained crews and individuals with outstanding results. Commercial exterminators have been called upon to enter into rat and typhus control in the municipalities where they service food handling and other business establishments that are providing a food supply or harborage for rats. Most of their work is done in connection with the sanitation officer's normal duties, although Birmingham, Mobile and Montgomery have full time inspectors assigned to this program.

Rat proofing and its modification, rat stoppage, have been a very expensive and questionable operation in Alabama. Obviously, it would be practically impossible to reconstruct the present rural structures to a rat proof degree. In many instances huge sums of money have been spent in rat proofing large establishments only to find them re-infested within a few weeks. It is apparent that if a corresponding amount of money was invested at the normal rate of interest that its return would provide sufficient funds for employing a trained exterminator, who, through the use of modern equipment and poison material, could maintain a rat free premise continuously.

In summarizing it may be stated that typhus was controlled following the 1933 outbreak only to have it reach serious proportions again in 1944. The cost of its control during the present program at an estimated average of \$2.00 per premise per year for the areas involved does not appear to be prohibitive. Individuals are being instructed in the use of red squill poison bait, arsenic water and cyanogas for rat control and DDT powder for flea control in an effort to provide a means for the program to perpetuate itself. The employment of commercial exterminators is recommended when advisable; and it is believed that the efforts of this

industry, if properly conducted, will prove to be an effective, efficient and ideal administrative method of rat and general insect control in the urban areas.

Congenital Glaucoma—It is easy in a tiny infant to mistake the congestive and irritative symptoms of glaucoma for mild conjunctivitis, blepharitis, or keratitis unless the possibility of this condition is kept constantly in mind. The disease is fortunately not common but failure to recognize it in the early stages may be tragic. Therefore, corneal haziness, associated with irritative symptoms, should lead to the suspicion of glaucoma even though no enlargement of the globe is noted. If the diagnosis is made soon after onset and the pressure reduced to normal by goniotomy, transparency of the cornea is completely restored and the eyes go on to a normal development. If, however, the eyes have become enlarged and permanent corneal opacity has resulted from prolonged corneal edema, visual impairment is inevitable, although the intraocular pressure may be normalized and further progress of the disease prevented. In the late stages, when the eyeball is very large, goniotomy is contraindicated. In this extremity cyclodialthermy puncture is probably the operation of choice.

It is unfortunately true that the diagnosis is usually not made until enlargement of the globe is present. Therefore, in view of the urgency of early operation, the tension should be tested with the tonometer if the slightest suspicion of glaucoma exists.

In the infant, tonometry must be carried out under ether anesthesia which should be deep at the moment the tonometer is applied to the cornea in order that a false reading may be avoided. It has been found that the tension may vary 10 to 15 mm. of mercury according to the depth of anesthesia and that only with complete relaxation is the tonometric reading dependable. While the patient is under the anesthetic, gonioscopy is performed if the cornea is sufficiently clear.

The diagnosis having been made, the operation may be performed immediately or may be delayed as the circumstances dictate. In the latter event, 5 percent prostigmin is instilled into the eyes every four hours until the time of operation. Tension may not be altered much by the prostigmin but, if it is reduced, visibility is increased by the lessened corneal edema.

Goniotomy seems to be the correct procedure for the cure of congenital glaucoma and has many advantages over other glaucoma operations. The cause is attacked directly. The angle of the anterior chamber is opened and the corneoscleral trabeculum is freed of mesenchymal tissue which obstructs the outflow of aqueous. The opening of the angle is somewhat comparable to the opening of the nasolacrimal duct blocked by embryonal tissue at its nasal end and the results are just as permanent.—McKinney, J. *Tennessee M. A., Aug. '49.*

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MAY 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During May 1949			May Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births.....	5775	**	**	22.2	24.3	25.2
Total stillbirths.....	185	**	**	32.0	28.9	35.4
Deaths (stillbirths excluded).....	2090	1201	889	8.0	8.3	8.2
Infant deaths:						
under one year.....	216	115	101	37.4	34.5	39.2
under one month.....	146	86	60	25.3	26.3	27.3
Cause of Death						
Tuberculosis, 001-019.....	79	37	42	30.3	44.1	40.0
Syphilis, 020-029.....	14	3	11	5.4	9.2	10.5
Dysentery, 045-048.....	3	1	2	1.2	***	***
Diphtheria, 055.....					0.8	0.8
Whooping cough, 056.....	1	1		0.4	1.5	5.0
Meningococcal infections, 057.....	1		1	0.4	0.8	0.8
Encephalitis, 082, 083.....					0.4	
Measles, 085.....	8	6	2	3.1	0.4	1.9
Typhus fever, 100-108.....						0.8
Malaria, 110-117.....	3	1	2	1.2	0.4	0.8
Malignant neoplasms, 140-200, 202, 203, †.....	205	138	67	78.7	87.5	70.2
Diabetes mellitus, 260.....	22	11	11	8.4	13.4	11.6
Pellagra, 281.....	6	3	3	2.3	3.1	5.8
Vascular lesions of central nervous system, 330-334.....	254	139	115	97.5	92.5	86.5
Other diseases of nervous system, 300-318, 340-393.....	41	20	21	15.7	6.9	***
Rheumatic fever, 400-402.....	6	2	4	2.3	0.8	***
Diseases of the heart, 410-443.....	593	383	210	227.6	190.0	190.2
Diseases of the arteries, 450-456.....	34	21	13	13.0	6.1	9.7
Other diseases of circulatory system, 444-447, 460-468.....	32	17	15	12.3	6.1	***
Influenza, 480-483.....	25	6	19	9.6	5.8	7.4
Pneumonia, 490-493.....	55	21	34	21.1	24.6	30.6
Bronchitis, 500-502.....	4	2	2	1.5	0.8	1.9
Appendicitis, 550-553.....	5	4	1	1.9	1.5	3.5
Intestinal obstruction and hernia, 560, 561, 570.....	11	5	6	4.2	4.6	7.4
Gastro-enteritis and colitis (under 2), 571.0, 764.....	11	4	7	4.2	3.4	1.6
Cirrhosis of liver, 581.....	14	8	6	5.4	5.4	5.4
Diseases of pregnancy and childbirth, 640-689.....	12	3	9	20.1	26.0	32.7
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684.....	4	1	3	6.7	3.1	6.0
Congenital malformations, 750-759.....	35	28	7	6.1	2.8	***
Accidental deaths, total, 800-962.....	126	82	44	48.4	66.8	69.8
Motor vehicle accidents, 810-835, 960.....	59	40	19	22.6	21.1	23.7
All other defined causes.....	380	215	165	145.8	194.6	210.3
Ill-defined and unknown causes, 780-793, 795.....	110	40	70	42.2	42.6	40.7

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the May report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204), and mycosis fungoides (205).

BOOK ABSTRACTS AND REVIEWS

Help Yourself To Better Sight. By Margaret Dorst Corbett, School of Eye Education, Los Angeles, California. Cloth. Price, \$2.50. Pp. 218. New York: Prentice-Hall, Inc., 1949.

The first efforts to improve vision by means other than by glasses that received wide attention were those espoused by Dr. W. H. Bates, M. D., who, in 1920, captured the public with his book entitled, "Perfect Sight Without Glasses." This spectacular announcement fascinated wearers of glasses, especially those with strong corrections, and his training program gained many followers, some disciples. The fact that few have been able to dispense with their glasses is sufficient evidence of the ineffectiveness of the method. The idea was so attractive that others, like Margaret Corbett, have attempted to find more satisfactory methods than the Bates System of visual training; but she too succumbs to psychological technics.

The Veteran's Administration, she informs the readers, has helped subsidize her ideas by approving a school for those wishing to learn at first hand her system of visual training, a rehabilitation government enterprise.

The book introduces Dr. W. H. Bates, M. D. and his system, giving testimonials of cured cases. The reference is made to the English philosopher and author, Aldous Huxley, who capitalized on the many wearers of eye glasses who were trying to escape from their glasses by writing a spectacular rendition of the same. His successful results are quoted.

Corbett's Visual Training is an expose of the application of basic psychology as applied to defective vision. The many exercises are described as "unstraining, and well-sunned eye exercises." These include a number of unnecessary, silly maneuvers which every individual performs unconsciously daily. Over and over, Margaret Corbett emphasizes relaxation, tension, ease of body and mind. In a sense one must hypnotize oneself into accepting poor vision, believing it to be good vision. Repeatedly she injects the thought that, if the mind is tense, something tightens. Strained eyes improve their condition by relaxing the eyes.

Reference is made to the so-called exercises of "elephant swing," "sailor's walk," "palming," "lid squeezing," "breathing on vision," and "sunning."

Somewhere she quotes a Greek great as saying: "A pleasant thing is for the eyes to behold the sun." The reviewer has seen a few of these Bates followers with irreparable central blindness as a result of such folly as staring at the sun.

In 1946, at the University of Washington Medical School, Department of Ophthalmology, and the Oscar Johnson Institute, Dr. Hildreth, Dr. Post et al. investigated the effects of visual train-

ing and better eyesight. Simultaneously, Dr. Alan Woods et al. at Wilmer Eye Institute studied visual training because the eye profession was bombarded with requests for evaluation of these methods espoused by optometrists and psychologists and some ophthalmologists. Their findings can be summarized as follows: These exercises do improve reception due to stimuli of the visual effort, as best results occurred in those patients with a pretraining acuity less than would be expected from their refractive error. Visual training had produced no change in the underlying refractive error. The improvement noted was due to teaching the patient to interpret his blurred retinal images more carefully. Improvement occurred at the cerebral rather than at the retinal level. In myopia it has psychologic value in re-adjusting the individual to his handicap—in some instances enjoying their soft, blurred, kindly world. Increased visual performance may result from improved co-ordination of the eyes and better interpretation.

Within narrow limits there may be some educational merit to visual training, and in the impressionable individuals there may be some beneficial psychological changes in vision.

This book offers no eye help to the general public for which it was written.

Karl B. Benkwith, M. D.

Everyday Psychiatry. By John D. Campbell, M. D., Diplomate, American Board Neurology and Psychiatry; Psychiatrist to St. Joseph's Infirmary and Crawford W. Long Hospital, Atlanta, Ga.; Instructor in Psychiatry, Emory University Medical School; Captain, M. C., U. S. N. R. Second edition. Cloth. Price, \$6.50. Pp. 380. Philadelphia, London, Montreal: J. B. Lippincott Company, 1949.

In describing the approval with which the first edition of this book was received, the author states that physicians, jurists, ministers and teachers—"all these have expressed their appreciation of a book that goes directly to the essence of the various personality aberrations." One must admire this manifestation of the author's self-effacing restraint and his academic reserve. It is regrettable that a few psychiatrists broke the unanimity of the approving clamor, "betraying a tendency to discourage any ideas in psychiatry which do not pay total homage to the Freudian School."

The revisions and additions do not materially enhance the value of this book for the "practicing physicians, medical students and social workers" for whom it is written. While it may be considered educational in that it presents a thesis at odds with currently held psychiatric thought, for the same reason it can hardly be considered practical for such a reading public.

The author's major thesis is that "Human nature expresses itself through four basic personality traits and two secondary personality factors. These traits are inherited, constitutional and immutable and are not subject to change by environment, emotion or training." These traits are intelligence, conscience, emotional reaction and psychosexual development. Secondary to these but not directly inherited and constitutional are sociability and special modes of adjustment. The author then proceeds to examine an ill-assorted group of "borderline" problems as mental deficiency, psychopathic personality, psychoneurosis, homosexual, schizoid, cycloid personalities, involutional syndromes, alcoholism in the dim light of these traits and factors. Volumes could be written which negate at least part of this basic concept, without the use of a single Freudian term.

With possibly the exception of the behaviouristic school, all psychiatric thought of the 20th century accepts, to a greater or lesser degree, the influence of constitution on personality configuration. However, complete acceptance of Dr. Campbell's thesis is tantamount to a return to the descriptive era of Kraepelin. The book shows the same nosological preoccupations. Its therapeutic tools are limited for the most part to such superficial weapons as environmental manipulation, persuasion and suggestion. Organic therapies and longitudinal analysis and synthesis receive scant if any attention. The "personality examination" described is cross sectional and certainly not to be recommended for the untutored examiner.

The author quotes voluminously from the literature and his bibliographies reflect the wide search which went into the preparation of this book. The style is highly personalized and fluid. Case reports are too long for the lessons they point up.

The fly-leaf bears under the title the words, "Concise—Clinical—Practical." The reviewer questions their propriety and their appropriateness. Caveat emptor!

Philip S. Bazar, M. D.

The Practice of Refraction. By Sir Stewart Duke-Elder, K. C. V. O., M. A., D. Sc., Ph. D., M. D., F. R. C. S., Hon. D. Sc. Fifth edition. Cloth. Price, \$6.50. Pp. 317 with 216 illustrations. St. Louis: C. V. Mosby Company, 1949.

The purpose of this book is to present in a manner suitable for the student and the practitioner the essential principles of the theory and practice of the correction of defects in the optical system. A simple and essentially non-mathematical form of presentation has therefore been adopted wherein all that is necessary for the clinical practice of refraction is described and explained without burdening the reader with innumerable mathematical proofs. The book is a classical presentation rather than theoretical, and its object is essentially practical.

Whatever the type of book the would-be refractionist uses, it cannot be insisted upon too strongly that the art of refraction cannot in any

sense be learned by reading. There is only one way of attaining efficiency therein and that is by assiduous and painstaking practice in the clinic of the medical school or hospital where large numbers of cases of all kinds are available, where findings can be supervised and corroborated.

The author is one of the ten most outstanding ophthalmologists in the world today. He is the author of a large four-volume treatise on ophthalmology which is the eye practitioner's Bible. He is well known in the field of experimental ophthalmology and practical ophthalmology. This book on refraction was one of the author's first publications, and this issue is its 5th edition. This is an excellent book for the library of everyone practicing Eye, or Eye, Ear, Nose and Throat. It is an excellent text for the student in ophthalmology.

Karl B. Benkwith, M. D.

Clinical Aspects and Treatment of Surgical Infections: By Frank Lamont Meleney, M. D., F. A. C. S., Associate Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University; Associate Visiting Surgeon, Presbyterian Hospital, New York, City. With a Foreword by Allen O. Whipple, M. D. Cloth. Price, \$12.00. Pp. 840 with 287 figures. Philadelphia and London: W. B. Saunders Company, 1949.

The author has drawn upon his very extensive surgical experience in conjunction with thorough experimental and clinical bacteriological studies to make this work a most timely contribution to a field which has not previously had sufficient stress paid to it as a subject. Publication was delayed until the author could satisfactorily evaluate the sulfa drugs and the antibiotics in different types of infections.

The subject is approached by locations and organs. The infections peculiar to each are considered clinically, bacteriologically and therapeutically. In his enthusiasm for the antibiotics he is still the surgeon attempting to aid Nature in her efforts by sound surgical principles. His discussion of chronic and undermining ulcers is particularly helpful.

The many case histories illustrating various aspects of infection, and the therapeutics used, successfully drive home his points. Great repetition is evident but this is, of course, purposeful. The illustrations seem, in general, well chosen. An extensive bibliography is included.

One would probably not feel inclined to read the work from cover to cover but many valuable aids can be gleaned from perusing its contents frequently.

John L. Branch, M. D.

The patient "can take it" from the doctor to a degree that no one else can match. The understanding and assurance the patient receives from the doctor have far more effect in creating a frame of mind conducive to successful hospitalization than any help the patient receives from others.—William B. Tollen, Ph.D., VA Pamphlet 10-27, Oct. 1948.

AMERICAN MEDICAL ASSOCIATION NEWS

STUDIES MOLE AS CARRIER OF POLIOMYELITIS

Study of the ground mole as a possible carrier of poliomyelitis is reported by L. E. Rector, M. D., of the Department of Anatomy, Washington University, St. Louis.

"After considering the habits and the geographic distribution of the ground mole one is struck with the possibility of this animal fulfilling four anticipated features of a natural host for poliomyelitis," he writes in Archives of Pathology, published by the American Medical Association.

"If a single animal or insect is ever found to be the reservoir of the disease, one may anticipate that it will be found throughout the temperate and tropical zones; that it will account for the frequently observed tendency of the disease to start and to have a higher incidence in rural than in urban populations; that it will account for the seasonal tendency of the disease in man, and that it will be so inconspicuous as to have escaped consideration to date.

"The mole is found in practically every country in the temperate and tropical zones. It is obvious that a higher percentage of the rural than of the urban population comes in contact with these animals; yet the prevalence of moles in the city parks offers urban dwellers sufficient contact with them—disregarding trips to the country. Furthermore, spot maps of urban epidemics of poliomyelitis frequently show a centripetal (toward a center) spread."

Moles come out on the surface of the ground during the hot summer months and in hot weather their runways are so shallow that they are covered merely by roots of vegetation, Dr. Rector points out. In hot weather people lie on the ground, frequently in close contact with mole runs.

"In cold weather moles use their deeper runs," he adds. "This subterranean existence could easily facilitate an inherently inconspicuous harboring of the virus between the seasons of common epidemic occurrence of the disease in man."

Out of 43 moles infected in the laboratory with poliomyelitis virus by injection or

from contaminated dirt, all except two died and six "demonstrated to a convincing degree" either paralysis or nerve involvement, he says. However, attempts to pass the virus from moles to monkeys were unsuccessful.

"In addition to the four concepts suggesting that the mole might be a natural reservoir of poliomyelitis, two facts have been brought out by the experiments that lend further support to such a hypothesis," Dr. Rector comments.

"First, cross infection between moles in casual contamination is apparent, and, second, the frequently encountered long survival times of some animals would greatly facilitate the subterranean harboring of the disease between epidemics among human beings. Were the disease to be found occurring among moles in conjunction with an epidemic among human beings, one would have a fair explanation as to why the incidence among males is somewhat greater than among females, 'for little boys are much more likely to be playing in the dirt than are little girls.'

"Many phases of this problem have not been investigated; however, physicians may be alerted to the advisability of keeping this problem in mind in taking individual case histories, as well as to the advisability of making epidemiologic surveys of moles in conjunction with epidemics of poliomyelitis."

REPORT GOOD RESULTS IN TREATING TOXIC GOITER WITH RADIOIODINE

Patients with toxic goiter for whom surgery, x-ray therapy, or antithyroid drug therapy is unsuitable can be treated successfully with radioactive iodine, four Los Angeles researchers report in the July 30 Journal of the American Medical Association.

Sixteen out of eighteen cases of toxic goiter complicated by heart disease, extreme emotional instability, extreme toxicity, recurrence after surgery of the thyroid, and malignancy of the thyroid were successfully managed by administration of the chemical, according to Myron Prinzmetal, M. D.,

Clarence M. Agress, M. D., Benjamin Simkin, M. D., and H. C. Bergman, Ph. D.

One of the patients still had mild toxic symptoms after treatment and the patient with a malignant condition showed no significant improvement.

Although radiation sickness from larger doses of radioiodine has been reported, no such reaction was observed from doses used in this study, according to the article.

Radioiodine therapy has several advantages, the researchers point out. It can be administered to patients able to be out of bed without causing them loss of time from work. As compared with antithyroid drugs, the patient does not need repeated laboratory tests and daily medication and is not subjected to the risk of certain unfavorable reactions that occur in some cases.

The lowest reported mortality rate in thyroid surgery in the postoperative period is 0.5 per cent, but the rate in most institutions is probably higher. There has been no death as a direct result of the therapeutic use of radioiodine. The cost to the patient of treatment with radioiodine is much less than the cost of operation, and the administration of the chemical is not followed by complications such as postoperative pneumonia, shock, paralysis of the larynx (voice box), unsightly scars, and emotional strain of major surgery.

So far, evidence points to a decreased incidence of progressive abnormal protrusion of the eyeball with radioiodine therapy as compared with its incidence with surgery.

The new treatment still has several disadvantages, however, the article indicates. The correct dosage of radioiodine is not accurately known. As a result, in some cases months of treatment are necessary before a favorable result is obtained. In other cases, too much of the chemical has been administered with resulting deficient action of the thyroid. Further experience should aid doctors to gauge the dosage.

Certain unknown dangers from radiation exist, and, as in any new form of therapy, unforeseen difficulties may occur as more cases are treated.

INDUSTRIAL POLLUTION CAUSES IMPORTANT HEALTH PROBLEMS

"Mankind has entered a new world of environmental conditions giving rise to serious

health problems," points out an editorial in the August 27 Journal of the American Medical Association.

The editorial follows in part:

"About one hundred years have passed since modern man first experimented in modifying his natural environment by the addition of numerous new and often artificial products created by modern industry. Occupational diseases furnish a vivid example of the many and frequently serious new health hazards to which the industrially employed part of mankind has become exposed.

"The inclusion of some of these agents in consumer goods, such as foodstuffs, cosmetics, medicines, household goods and clothing, and their sometimes indiscriminate use have brought the general population into close contact with the injurious factors in the modern industrial environment.

"Perhaps the most important and alarming aspect of the recent change in human environment is the increasing and often severe pollution of the air, soil, and water with both industrial wastes and regular products of industrial manufacture, such as pesticides and coal and petroleum road tars and asphalts, injurious to human health.

"Fumes and gases from petroleum refineries are obnoxious to the people living in their environs; their odors are offensive and even nauseating. Such fumes contribute to the formation of the 'smog' encountered in the Los Angeles area and give rise to irritation of the eyes and the respiratory tract. Coke ovens and other industrial plants are a source of excessive production of soot and sulfur dioxide from the burning of coal. Considerable amounts of soot are released into the air during the production of carbon black from natural gas or mineral oil and during the burning of waste oil residues near oil refineries.

"The potential carcinogenic properties of soot are well established by numerous animal experiments and are supported by the occurrence of cancer of the skin in chimney sweeps. Apparently health hazards of various types exist for the population living in the immediate environment of other industrial establishments through air pollution with wastes.

"Prolonged sterilization of the soil has been produced by the deposition of arsenicals from smelter fumes or as insecticides.

In a few instances such soil pollution by arsenic-containing industrial wastes has resulted in the contamination of the drinking water supply with toxic amounts of arsenicals. The extensive pollution of rivers and lakes with industrial wastes and urban unprocessed sewage has converted many bodies of public water into unwholesome cesspools, dangerous to any form of life dependent on them as normal environment or for water supply.

"Although acute mass disasters from environmental pollution by industrial wastes are spectacular events because of the number of deaths and diseased persons encountered, such catastrophes occur rather infrequently as the result of unusually massive exposures and are therefore of lesser importance than more widespread and less obvious injuries to health occasioned by the prolonged action of smaller concentrations of the environmental injurious agents on larger population groups. The type and degree of health hazards produced by such exposures is not readily ascertained.

"Often the symptoms produced are non-characteristic and may be easily confused with those seen with bacterial infections, nonindustrial allergies, or constitutional anomalies."

SYNTHETIC DRUG AIDS SHAKING PALSY VICTIMS

Successful use of an almost entirely non-toxic drug to alleviate tremor and other symptoms of shaking palsy is reported in a recent issue of the Journal of the American Medical Association.

The synthetic compound, called Artane, counteracts constriction of muscles and other effects produced by certain nerves. Artane affords as much relief to patients with the disease as does any other available drug, according to Drs. Lewis J. Doshay and Kate Constable, of Columbia University and Neurological Institute, New York.

Artane is expected to be particularly useful in treating long-standing cases of the disease and cases complicated by high blood pressure and heart and kidney disorders, the article indicates.

"The results of clinical studies in a series of 117 patients treated with this agent establish its great usefulness against Parkinsonian disorders and its remarkable freedom

from disturbing side reactions," the doctors point out.

"Besides," they say, "it has an unusual cerebral-stimulating action, which is particularly effective in combating the depression and inertia prevalent among these patients. It is safe for use by the young and the old, the ambulatory and the infirm, the hypertensive, the cardiac, and the nephritic.

"It recommends itself as the drug of choice in arteriosclerotic and idiopathic cases, and should be tried regularly in postencephalitic cases in which other forms of medication prove disturbing or ineffectual."

HEART INFECTION TAKES HEAVY TOLL IN DISABILITY

Despite the success doctors have achieved in curing infection of the lining of the heart by administering penicillin, patients who recover from the disease may be disabled.

One out of three patients in a group of 18 reported in the September 10 Journal of the American Medical Association were left with a progressive heart condition, although penicillin cleared up the active infection.

Subacute bacterial endocarditis has been until recently an almost uniformly fatal disease. In a number of cases it follows rheumatic fever, the article points out.

With the advent of penicillin therapy, however, doctors have been able to cure many patients of the active heart infection. But since the membrane which lines the heart muscle covers the valves of the heart as well as its inner walls, endocarditis may leave scars which cause narrowing of one or more valves or interfere with their proper closing.

All of the group of patients reported by Drs. Sherman R. Kaplan, Ray H. Rosenman, Louis N. Katz, and William A. Brams, of Michael Reese Hospital, Chicago, were followed from 25 to 61 months after their heart infection was cured by penicillin therapy.

Six of the patients had progressive heart disability since the onset of subacute bacterial endocarditis. In three of these the disability led to death from heart failure. Twelve showed no progression of their heart condition, the doctors say.



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1. Brewster, J. M., U. S. Naval Med. Bull. 49: 1-11, January-February 1949.

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Miscellany

A. M. A. MAKES RECOMMENDATIONS ON COMBATING SPREAD OF POLIO

Recommendations for dealing with the threat of widespread infantile paralysis are contained in an editorial in a recent issue of the Journal of the American Medical Association.

The editorial while offering suggestions for preventing the spread of poliomyelitis also speaks against disturbing or altering unnecessarily the normal pattern life in the community.

"Whatever is done to upset the usual routine of children in a household or of adults in their habits is likely to bring more trouble than good as far as control of infantile paralysis is concerned," says the editorial.

It points out that the incubation period is seven to 14 days but may be as short as three days or as long as 45 days. The disease may be spread by contact through discharges from the mouth, body wastes and flies. It adds in part:

"Although flies may be contaminated with the virus, reliable evidence is lacking of the spread of poliomyelitis by insects, water, food or sewage. During an epidemic infection is highly prevalent, but only a limited number of cases are clinically identifiable. For every known case between 10 and 100 persons have inapparent infection. Examination of the spinal fluid is an important although not specific diagnostic procedure. The period of greatest communicability is the latter part of the incubation period and the first week of acute illness.

"At least three groups of strains of poliomyelitis virus are now known, and infection with any one of these may or may not render the person infected immune to attack from the other two. Susceptibility to infection is general. Thus far the known vaccines, drugs, serums or antibiotics are without specific value against the disease.

"The expectancy with regard to permanent crippling at the time of onset indicates that about 50 per cent will ultimately emerge free, about 25 per cent will have mild physical limitations, about 15 per cent will have severe crippling and about 5 to 10 per cent will die. Pregnant women are probably not more susceptible to poliomyelitis than other persons. Children born to women who have poliomyelitis during pregnancy or labor are normal. Fatigue in the early stage of poliomyelitis may influence adversely the extent of paralysis. Children should be prevented from becoming over-fatigued during the poliomyelitis season.

"The following points are stressed among the recommended epidemic measures:

"1. General notice to physicians of the prevalence or increase of incidence of the disease, description of usual characteristics of onset and necessity of diagnosis and medical care, particularly for bed rest, and information to the public at large on similar matters.

"2. Isolation in bed of all children with fever pending diagnosis.

"3. Education in such technic of bedside nursing as will prevent distribution of infectious discharges to others from patients isolated at home.

"4. Postponement of elective nose or throat operations or dental extractions.

"5. Avoidance of excessive physical strain.

"6. Avoidance of unnecessary travel and visiting especially of children during high prevalence of the infection.

"Patients with acute poliomyelitis are admissible to a general hospital if appropriate isolation precautions are employed. Isolation procedures used for the care of patients with acute poliomyelitis are similar to techniques used in the hospital care of other communicable diseases. Patients may be cared for at home if home facilities and medically supervised care are adequate.

"Public and private schools should not be closed during an outbreak of poliomyelitis nor their opening delayed except for specific reasons. Schools to which children are transported in buses from widely separated areas or boarding schools, excluding colleges and universities, should delay opening sessions if an outbreak of poliomyelitis exists in the area where the school is located. Summer camps should open as usual unless there is an outbreak of poliomyelitis in the area in which the camp is located. Places of recreation and amusement need not be closed; however, the attendance of children at such places should be discouraged.

"These recommendations were motivated by the desire to avoid as far as possible the effect of disturbing or altering unnecessarily the normal pattern of life in the community."

DOCTORS URGE EARLY SEARCH FOR CHILDLESS MARRIAGE CAUSE

An investigation into the reasons for a childless marriage should be started a year after a planned pregnancy, three Baltimore physicians recommend in the August 20 *Journal of the American Medical Association*. It has been customary to show little interest or concern in the reproductive disappointments of a couple until sterility has continued for at least two, and usually three years.

The contrary view is expressed by Drs. Alan F. Guttmacher and Samuel Rubin of the Johns Hopkins University School of Medicine and of the Sinai Hospital, and Dr. Christopher Tietze of the National Committee on Maternal Health, Inc.

They base their recommendation on a study of contraception among 2,000 private obstetric patients.

"Almost two thirds of the 2,000 pregnancies occurred after contraception had been discontinued for the avowed purpose of initiating pregnancy," they report. "An additional sixth of the sample had not used contraception at all. Only 19 per cent of the pregnancies were the result of actual contraceptive failure.

"Three fifths of the planned pregnancies occurred within three months, and more than nine tenths within one year from the time contraception was discontinued. To us this seems decidedly significant. It might furnish the obstetrician and gynecologist grounds to pause and consider."

SUPERSTITION REPORTED DANGER IN CHILD RAISING

Specialists in children's diseases report that often one out of four questions asked by young mothers is based on superstition, says an article by Mrs. Estelle Bond, wife of a Boston surgeon, in the September issue of *Hygeia*, health magazine of the American Medical Association.

"Unhappily, superstitions are likely to have more serious than comic results," Mrs. Bond writes. "Perhaps the most dangerous misbeliefs are those surrounding that process commonly undergone by every human being—teething. The very universality of the experience has engendered as formidable an army of old wives' tales as ever bucked the persevering pediatrician."

Among the most common superstitions still existing are: Babies are blind at birth, like kittens; prenatal influences, such as frights, may cause birthmarks; it is bad luck to cut a baby's hair before he is old enough to go to a barber: baby must not look into a mirror until he or she has teeth; a baby who looks at the sky will have crossed eyes; a child's growth will be stunted if he crawls between someone's legs or allows someone to step over him.

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BACKGROUND

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THE SULFONAMIDES IN DERMATOLOGY

H. R. COGBURN, M. D.

Mobile, Alabama

Any exploration into the history of a medical subject is bound to give an increased knowledge of that subject and an ability to use such knowledge to the utmost advantage.¹ Such an investigation may reveal an early discovery possessing features which were originally incompletely recognized. The story may then develop through stages in which knowledge may be advanced or retarded, and it may finally culminate in some long sought objective. Such a story is exemplified by the sulfonamides, which in themselves represent a chemotherapeutic goal which has been sought for since man first comprehended the nature of bacteriology.

The first knowledge of the sulfonamides is afforded by the synthesis of sulfanilamide in 1908 by Gelmo, who was working in Vienna. It was first employed to produce a better quality of dyes. Five years later a closely related dye called chrysoidine was found to be bactericidal. In 1919 sulfanilamide was synthesized in this country and was reported to be strongly bactericidal. The Journal of the American Medical Association in June 1936 carried an abstract of a paper relating to the sulfa compounds.

The introduction of the sulfonamides in medical practice, first in Europe and then in the United States, certainly revolutionized the treatment of many serious and highly dangerous infectious diseases. These drugs

were widely accepted by the medical profession and widely acclaimed by the laity in this country. They were extensively employed and written about in the medical literature, and justly so, because they have saved many lives. This fact cannot be controverted.

The existence of these drugs and the extravagant claims made regarding their virtue, describing them as miracle drugs, made good newspaper headlines in the daily press.

It became possible for laymen to make purchases at drug stores, and in a relatively short time thousands of people were taking sulfa drugs without the benefit of competent medical advice, and before there had been time for proper appraisal and evaluation of the drugs, and before adequate clinical tests as to efficacy and toxicity had been made.

For well over a decade the sulfonamides have been extensively used in general therapy in this country.² Notable reductions in case mortality rates of streptococcal, meningococcal and pneumococcal infections have followed the use of these drugs. The course of staphylococcal, gonococcal and other stubborn infections have been radically altered by therapy with the sulfonamides. We have had, following hard on the heels of the wide acceptance of sulfonamides in general therapy, a wide range of toxic manifestations due to their use in medicine. The sulfa drugs produce skin rashes that range

Read before the Association in annual session, Montgomery, April 19, 1949.

1. Brown, A. E.: History and Pharmacology of Sulfonamides, West. J. Surg. 50: 416-423, Aug. '42.

2. Long, P. H.: Use and Abuse of Chemotherapeutic and Antibiotic Agents, New England J. Med. 237: 837-839, Dec. 4, '47.

from mild to very severe and even fatal. The sulfa drugs produce great destruction throughout the human body. They destroy the cells of the blood. They destroy the blood-producing elements in the bone marrow. They account for some cases of acute hemolytic anemia, leukopenia, agranulocytosis, hematuria, anuria; they produce hepatitis; they affect the central nervous system. They may cause blindness. They cause dizziness and may cause convulsions and death. The medical literature is now filled with increasing evidence that enveighs against the indiscriminate use of the sulfa drugs.

Many deaths have occurred from the use of sulfa drugs. In 1941 New York City alone reported 28 known sulfonamide deaths. Many more were suspected.³

Grollman and Slaughter⁴ in 1947 estimated that there is one death in every 4,000 persons given chloroform anesthesia. They report that in properly hospitalized patients, receiving adequate medical and nursing care, there is one death in every 2853 patients receiving sulfa drugs.

Cook⁵ reports that exfoliative dermatitis, the generalized type, due to administration of sulfonamides is relatively rare, and he takes the view that this is now almost a medical curiosity. I wish to take exception to this observation. My own experience would indicate that this is not yet a rare occurrence, but that it still constitutes a serious medical problem that we have to face all too often.

Bentley Phillips⁶ reports that of 2,500 soldiers treated by dermatologists in several military hospitals for various skin diseases during the recent war 4.11 per cent were found to be sulfonamide dermatitis. In no case did dermatitis occur when the patient had been treated for less than four days. Local application of the sulfonamide for a superficial skin condition was found in each case.

3. Bastedo's Pharmacology, Therapeutics and Prescription Writing, ed. 5, pp. 642-651.

4. Beckman's Treatment in General Practice, ed. 6, pp. 977-989.

5. Cook, M. J.: Exfoliative Dermatitis Due to Sulfathiazole, *Arch. Dermat. & Syph.* 51: 305-306, May '45.

6. Phillips, B.: Clinical Study of Sulfonamide Dermatitis, *Brit. J. Dermat.* 58: 213-227, Sept.-Oct. '46.

Sulzberger et al.⁷ claim that the topical application of sulfonamides is generally contraindicated in skin diseases, and that the systemic administration has a restricted usefulness. The topical applications are usually contraindicated because the therapeutic index of the sulfa drug is not so good as many of the older and some of the newer bactericidal agents: that is to say, the sulfonamide ratio of therapeutic effectiveness to sensitizing potential and irritant effect is not advantageous. Dermatologists for the most part have to all intents and purposes condemned the use of sulfonamides in the treatment of skin diseases, and this is because of the potential dangers that lurk in the use of these drugs.

Bitter experience has exerted a tremendous pressure on the dermatologist, to the end that other and less dangerous drugs have been sought out.

We must admit there is virtue in topical applications of the sulfonamides in some few skin conditions we encounter in medical practice. We must also admit there is danger in their use. It is not at all difficult to produce a dermatitis, or local reaction, and even a general sensitization from the local use of the sulfa drugs, even when applied on a very small area of skin. These topical applications may sensitize the patient and make sulfa therapy a highly dangerous procedure if, at some later date, the patient has a serious systemic infection where the sulfa drug might be a life-saving measure.

Andrews⁸ lists in his splendid text a good many conditions in which the local and systemic use of sulfonamides would be helpful, and in some instances it is actually the drug of choice, in spite of the newer and later antibacterial agents, penicillin and streptomycin. Dr. Andrews of course warns of the dangers we encounter when we administer the sulfonamides, and more or less leaves the question to the experience and intelligence of the physician employing them.

To the more familiar toxic manifestations we have come to know, on the skin, from the use of sulfa drugs, we may now add the fixed eruptions. The reported cases seem

7. Year Book of Dermatology and Syphilology, 1947, pp. 7-10.

8. Andrews, G. C.: Diseases of the Skin, ed. 3, W. B. Saunders Company, Philadelphia.

to consist mainly of brownish or black macules⁹ of the skin surface that flare up and become inflamed when the causative agent is administered.

We also find a fixed eruption of the skin and mucous membrane that is caused specifically by the administration of sulfadiazine.¹⁰ A case is reported of bullous lesions that were confined mainly to the penis and to the upper lip. The lesions cleared up when the drug was withdrawn and promptly recurred each time sulfadiazine treatment was resumed.

Sulzberger¹¹ ran a group of 254 experimental subjects by making daily topical applications of sulfonamides, and the incidence of dermatitis was 19 per cent. A 5 per cent ointment was used in each case. The applications were made once daily. There was a close correspondence between the sensitizing capacity of the individual compounds and their water solubility. The most soluble, sodium sulfadiazine, produced dermatitis in 57 per cent of the tested subjects. Sulfanilamide showed 22 per cent dermatitis. Sulfathiazole produced dermatitis in 7 per cent of the tested cases, and there was a dermatitis in 5 per cent of the sulfadiazine-treated group.

Brown¹² has made a valuable contribution to the literature regarding the uses and abuses of the sulfonamides, and the medical profession is indebted to him for some of his timely investigations and reports. He holds to the belief that we could retain and use the sulfa drugs to the distinct advantage of the patient, and at the same time could avoid a great deal of the trouble we encounter as a result of their toxicity. His formula is simple, and I think he has hit upon the crux of the whole situation. The only way we can ever hope to use these valuable drugs, and to avoid many of the serious consequences of their misuse, is to use the knowledge that is available to every physician. We must acquire an accurate knowledge of what sulfonamides can and

will do, and what they never can do. We must make use of the knowledge we have possessed for years, and thereby retain one of our most valuable chemotherapeutic agents. We must make an accurate diagnosis and then be able to determine whether the sulfonamides are an optional or an essential measure. If sulfa is determined to be the essential drug, then the physician must possess the ability to select the particular one that will be best suited to the treatment of the particular infection to be treated. We must settle once and for all that the sulfonamides are bactericidal. Now we are told they are bacteriostatic. Be that as it may. For all practical purposes we may reasonably expect destruction of bacteria, and that is all that these drugs can do that is helpful to the patient.

It must be made clear to us that these are dangerous compounds. We must understand that it is futile, and it may be damaging, to apply sulfa compounds for such skin conditions as eczema, dermatitis venenata, psoriasis, lichen planus, pityriasis rosea, ringworm, dandruff, sunburn, drug rashes, urticaria and a long list of all manner of skin manifestations that are often aggravated when sulfa drugs are applied. These potentially dangerous preparations are still handed out over the counters too promiscuously, and people who have not been to a competent physician do damage to themselves, and because of toxic reactions are forced to seek medical aid. This misuse of the sulfonamides is a common observation of those who make any study of the skin. A still rather common practice is to give sulfa drugs systemically for minor ailments that would respond to less drastic and less dangerous measures.

The suggestion is offered that we refrain from using sulfa drugs topically for insignificant skin lesions that will respond to other known medicinals that are not so prone to irritate or sensitize the patient. The plea is made that we not give sulfonamides systemically for minor ailments.

The important and established fact that serious and irreparable damage may be done to the cells of the blood, to the kidneys, to the central nervous system, and to other internal organs by the needless and careless use of the sulfonamides should be sufficient deterrent. With the knowledge that is be-

9. Leifer, W.: Fixed Sulfathiazole Eruption of Unusual Distribution, *Arch. Dermat. & Syph.* 53: 125-127, Feb. '46.

10. Cole, L. M.: "Fixed" Eruption of Mucous Membrane and Skin Caused by Sulfadiazine, *Arch. Dermat. & Syph.* 54: 675-676, Dec. '46.

11. Year Book of Dermatology and Syphilology, 1947, P. 197.

12. Brown, A. E.: Use and Abuse of Sulfonamides, *Minnesota Med.* 28: 859-860, Nov. '42.

fore us; with the recorded history, with a reasonable ability to practice medicine, we should view the present situation with concern. The sulfonamides should be reserved for use in grave infections, where they may be life-saving remedies, and certainly the health, and even the life of the patient should not be placed in jeopardy through

lack of awareness of the dangers involved, nor through carelessness.

Clinicians should exercise every caution that we not become contributors to a startling menace that no one knows how to overcome once the damage has been done by the sulfonamides.

56 St. Joseph Street

ROCKY MOUNTAIN SPOTTED FEVER

REPORT OF A CASE IN SHELBY COUNTY

SAM SHAFFERMAN, M. D.

Columbiana, Alabama

Rocky Mountain spotted fever, though rare, is seen in Alabama. This report is presented as the first proven case reported in Shelby County, and as one which responded to aureomycin therapy. A longer time interval between onset and rash than is usual with the disease was also noted in this case.

Rocky Mountain spotted fever is a tick borne disease clinically characterized by its sudden onset with chills and fever, severe headaches and muscular pains, restlessness, delirium, and a macular or maculo-papular rash. The disease is harmless to the tick and hereditary transmission occurs so that no animal host is necessary as a reservoir of the disease.

The incubation period ranges from 2 to 12 days, with the prodromal state manifested by malaise, anorexia, headache, and chilling sensations. The disease itself begins with a chill and slowly rising temperature. Headache and joint pains are severe.

The typical rash appears usually on the fourth to the sixth day being first detected on the flexor surfaces of the wrists and ankles. The rose colored eruption is usually macular in the beginning, later becoming maculo-papular in type, and during the early stages disappears on pressure. As the disease progresses, new crops of lesions appear on the arms, legs, abdomen, chest, back and forehead. In contrast to typhus, it appears on the palms of the hands and the soles of the feet. In severe cases a purplish or brownish pigmentation remains for weeks after convalescence.

Rocky Mountain spotted fever may be confused with many diseases; notably,

typhus, measles and typhoid, but the history of a tick bite is of prime importance in making a diagnosis. Typhus fever is the one condition which offers the most confusion as to differentiation, and laboratory tests are usually the only deciding factors. The rash in typhus, however, usually is absent from the palms and soles and this fact may be helpful in making a diagnosis. The complement fixation and rickettsial agglutination tests, while relatively new procedures, appear to be the most effective ones for the differential diagnosis between typhus and spotted fever, since the Weil-Felix reaction is positive for both. It has also been found that the complement fixation for rickettsial pox is highly positive in Rocky Mountain spotted fever.

The therapy of Rocky Mountain spotted fever now resolves itself to the use of either aureomycin or chloromycetin, plus the indicated supportive therapy. The case reported here indicates the dramatic response to aureomycin.

CASE REPORT

The patient, a 38-year old white male, was first seen on May 20, 1949 with a chief complaint of chills and fever.

The present illness began five days previously when the patient developed a severe headache. The following day he consulted a physician who found his temperature to be 100 but essentially negative on physical examination. He was placed on aspirin and codeine capsules, plus buffered sulfadiazine and sulfamerazine suspension. In spite of this medication, the headache continued and the elevated temperature persisted. On the

fifth day of the illness he again consulted the physician who found his temperature to be 103. Quinine was added to previous medication. On the sixth day of the illness the patient was seen by the author at the patient's home. Severe headache, backache, and chest pain were the predominating complaints, in addition to the chills and fever. Temperature was 104, pulse 100, blood pressure 120/80. The remainder of the physical examination was essentially negative except for a slight reddening of the posterior pharynx. He was given 300,000 units of procaine penicillin in oil. The following day he felt much improved and the temperature had dropped to 100. On the eighth day of the illness the temperature rose to 104 and the patient became delirious. All medication was stopped since no specific diagnosis had been made. The following morning, the ninth day of the illness, his temperature rose to 104 $\frac{3}{5}$ and a rose colored macular rash was noted on the lower extremities, including the soles of the feet. The remainder of the physical examination was essentially negative. A history of tick bite was elicited and a clinical diagnosis of Rocky Mountain spotted fever was made. Blood was taken at this time for a Weil-Felix and was reported as positive for *Proteus* OX-19 in a dilution of 1/320. Urine and stool cultures taken at this time were negative. The patient was started on aureomycin, 250 mgm., every three hours. The next day the rash completely covered the patient, except for his face, and his temperature had dropped to 102. Delirium was still marked. The following two days saw the temperature dropping steadily to normal on the twelfth day of the illness, the fifth day of aureomycin therapy. After the temperature had been normal for a period of 48 hours, the aureomycin was stopped.

The rash which reached its height on the fourth day of its appearance was scarcely visible by the seventh day.

On May 30, the fifteenth day of the illness, the patient was still slightly disoriented at times and weak but sufficiently recovered to sit up for short intervals. The Weil-Felix was positive for *Proteus* OX-19 in a dilution of 1/1280. Complement fixation test for Rocky Mountain spotted fever was positive in a dilution of 1/128 and for rickettsial pox in a dilution of 1/256. On June 11, twenty-

six days after the onset of the illness, the Weil-Felix was still positive for *Proteus* OX-19 in a dilution of 1/320 and complement fixation was positive for Rocky Mountain spotted fever in a 1/32 dilution and rickettsial pox in a 1/128 dilution.

The patient returned to work six weeks after the onset of illness. Mild secondary anemia which developed during the course of the illness was treated with liver and iron therapy.

SUMMARY

1. The first proven case of Rocky Mountain spotted fever in Shelby County is reported.
2. A review of the symptomatology and diagnosis of the disease is given.
3. Aureomycin therapy utilized in this case was apparently specific.

The Rheumatic Heart—The rheumatic heart is the heart of a young person who has had some acute infection from which the cardiac malady is dated. It may be chorea in childhood, or even scarlet fever, though the latter is unusual. It is more frequently tonsillitis, sore throat, a "cold," or an acute rheumatic fever. The first sign of its presence is a slight systolic blow heard in the mitral area and transmitted toward the axilla. It is transmitted in this direction because it is made in the left side of the heart, which lies behind the right side of the heart. The murmur cannot come through to the anterior wall of the chest because it is padded off by the right side of the heart, which is in front. It can escape, however, up into the armpit from underneath the heart, and so may be transmitted into the back of the chest. Thus one hears such mitral murmurs in two localities, the left axilla and left side of the back. The heart may heal in this condition. The patient may for the rest of his life have nothing but the remains of the mitral insufficiency, but, unfortunately, in the great majority of cases an extension of the original disease takes place, and in the course of time, sometimes in a few years, there is added to the original mitral insufficiency a mitral stenosis.

Nor does the process stop here. Frequently there occurs an extension of the inflammation to the aortic valves. If such an extension takes place, the pathogenesis is always the same. There is first the production of an aortic insufficiency which may heal and remain healed indefinitely, or the morbid process may go on to the production of an associated aortic stenosis.—*Folsom and Kelley, J. Florida M. A., August 1949.*

THE PROFESSION'S PLANS IN THE FIELD OF PUBLIC RELATIONS

W. A. DOZIER, JR.

Director of Public Relations

The Medical Association of the State of Alabama

Montgomery, Alabama

Some of the remarks I will make must, of necessity, be general. This situation is forced upon me because of the time at hand in which to try to cover such a broad subject as mine, and it is also caused by the situation before us whenever dealing with people. However, there are the specific things which will be dealt with, and the general statements will, I believe, serve to set a pattern and in that manner will be of value.

The simplest and by far the most general statement I can make is that your beginning program of public relations as set forth in September of last year will be continued. Those phases which are underway will be continued and increased and those which, for one reason or another, have been allowed to lag or lie dormant will be pushed forward as soon as conditions permit.

Some of you have heard me say that I consider the work lying before us to be a two-fold job; and I now want to consider it in that light. First, we must preserve in this country an atmosphere, social and economic, that is conducive to the practice and advancement of medicine in a system of free enterprise. And second, because of the social thinking and demands of the age, we must propound and carry to fruition a positive program which leads to an advancement in the health and medical care of and for the people of our country. Though for convenience we think and talk of our efforts and plans as if they were two separate jobs, we must remember that each phase must move along with the other. Though emphasis may for a time center largely on one of the two parts, we can never forget the other or allow it to drop behind in our march forward. It is a situation comparable to an operation. You must watch the heart beat as well as the incision you have made.

It often seems that we who are interested in preserving a proper atmosphere are bucking a trend in social thinking and ac-

tion. There are far too many people willing to let John do it, and there seems to be an increasing number of people who believe that the government should do everything for them and that the government can do it better than can private enterprise. For centuries the medical profession has been charged with the responsibility of guarding the health of the people. But now, more and more every day, another responsibility is being placed upon you—a responsibility that you undoubtedly did not want but one which you have not and must not refuse.

Because of one reason or another you are now in the vanguard in this constant fight to preserve our form of government and our method of life so far as concerns our economic system. As I said, I must speak in general terms on some things. This is one. We are not in a position at the moment to call the signals in this fight, for they are called by others who are close to our political leaders. Therefore, we must be prepared to meet any situation on a moment's notice. This demands that we keep informed at all times; and as soon as information becomes available, we must decide our action. Take, for example, the present situation. There is a new bill before the Senate as proposed by Senator Hill. Copies of this bill have been put in the hands of your Board of Censors. Thereafter, Senator Taft also made a proposal. I have written for copies of this. The newspapers tell us that Mr. Truman will make a proposal in a very short time. All of these proposals must be considered fully and action must be taken on all of them.

We are fortunate in that this is not our fight alone, for it also affects many, many others. I say we are fortunate and by that I mean that the medical profession alone could not defend our heritage. We must have the assistance of other thinking groups. We are getting that assistance, but to do so we must accept the challenge of getting information to these other people. The profession has recently done an excellent job

in this. However, each of us must, as the condition becomes more urgent, do an added amount. So on this matter of preserving an atmosphere we must be vigilant, decisive, and active; and such is our plan.

Let us now turn for a few minutes to a consideration of the other phase of our program—that of developing and instituting a positive plan. You have heard in the committee reports of the work which has been done with the Health and Medical Care Council of Alabama. Let me pause for a minute on the philosophy behind this work. In view of the fact that physicians are logically more conversant in the field of health and medical care, it is only proper that they be the leaders in such a move as our Health Council. However, in a complex society such as ours, it is impossible always to know the definite needs of other groups and it is even more impossible to know all the ramifications of a unilateral decision or action. The best way to know these needs and decision ramifications is to sit down with other groups and talk. Thus one may acquire fuller knowledge and in turn be more able to take proper action. And of great importance is the fact that this action will have the backing of more than one group; it can become a concerted effort.

At the moment we are at the point where recommendations have been made by the Health Council. Action will be taken on these recommendations at this annual session of the Association. As soon as the recommendations are approved or amended as needed, the big job is only beginning. Thus far the plans are in the word stage. The next move is action, action to bring to fruition the proposed plans as recommended by the Health Council. What I am saying here is that the Work Conference, as held on February 10, 1949, and an approval of the recommendations by this group are just a beginning. The real job lies ahead of us. It will take continued action for some time to come if we are ever to see success in pushing this or any other positive program to a proper conclusion. Our proposal in this field is to take such plans and work through the process of necessary action to make these plans a realized fact.

Let us turn now to some of the more specific things that I want to mention. Part of my job as it is set up is to report to you

the feelings and emotions of the public toward the profession. It is a known fact that the medical profession has become the whipping boy in national politics. The most constant criticism there and the most constant complaint on the part of individuals is the cost of medical care. On every hand one hears it said that the costs of medical care have risen so high that one cannot afford to go to a doctor. And each of these stories is backed up with a personal experience. It cannot be denied that most people could not pay from ready cash the costs of a long illness. Some means must be devised whereby people can meet their obligations and still retain their feeling of self respect which comes through self support.

Part of the answer to this problem is in an educational campaign. The public must be shown that the answer to most monetary problems of this nature lies in budgeting by means of voluntary health insurance. Part of this job can, should, and will be done by the insurance groups. Part of it will be done by the American Medical Association and part of it by the State Medical Association. But a part of it must also be done by the individual physician.

The logical result of the campaign mentioned above will be an extension of voluntary health insurance. This is necessary if we all are to quiet the hue and cry for a compulsory form. The extension of such a plan requires cooperation on the one hand by the insurance groups and on the other hand by all who give service in the field of medical care—physicians, dentists, hospitals, and all others. This step also resolves itself into a situation where the individual physician is the keystone.

Then there are the complaints against the cost of service rendered by specific physicians. These are over and above the general complaint. It is certainly not my job—I do not have the authority, and if I did have, I would not attempt to determine what you should charge for any specific service you render. So far as I am able to see that must be a matter for you to decide. But let me repeat to you what I hear day after day. Most people will say, "I don't think the medical profession as a whole is charging too much, but there are certain ones who are causing all the criticism for the whole group." As I have said, this is what people

say to me almost every day. How much truth there is to such a statement I do not know, but it is certainly a feeling held by many people. Whether true or false the complaint is so prevalent that it behooves each one to look into his own personal practices to see if he be one of those who is singled out by the public as a man who charges excessively. As I have intimated, the question of medical care costs is one that must be studied by the individual, the County Medical Societies, and the state and national organizations. It is our most delicate problem right now but it is certainly our most urgent one. Therefore, I recommend it to you for immediate study on all levels.

A second thing I want to talk with you about is the complaint so often voiced concerning night calls. May I say first though that everyone realizes that you as a physician must have sleep and rest. Usually a person begins with such a statement as that and then goes on to say, however, that it must be arranged where medical service may be had twenty-four hours a day. The public expects the answer to this problem to come from you as a group. This problem is one that seems to be more serious in the larger centers of population where many people do not have a regular family physician or where there is a large turn-over in the population.

May I also say that there are certain County Medical Societies in the state that have already sat down together and worked out this problem. Wherever the problem has not been met, it should be. Whenever you tackle this problem I believe it would be helpful to publicize your plan, explain your position to the public, and ask for its support and assistance. In almost every case I believe you will find the public cooperative and happy to assist. May I offer the assistance of the Public Relations Office in helping any Society handle this matter, and may I urge you to be sure that you are meeting the situation in a manner equitable to you and the public.

Another plan in mind at present is to hold in the near future a state-wide public relations meeting. As you know, the County Medical Societies have been requested to set up their own public relations committees. Many of these are now functioning. How-

ever, some have not been appointed, but I hope they will be very soon. We need to get together for a coordination of our work and for a discussion of techniques. Such a meeting could have been held earlier but it would have been of less value then than it would now. Patterns are gradually evolving in our work and we need to take these out, look at them, change and strengthen them where necessary, and plan means of making them function more fully. I believe that such a meeting is needed soon and I will very probably be in contact with you on this matter in the very near future.

Let me also call to your attention one other thing. Earlier I mentioned the value of discussion with other groups. We have not begun to find all these groups as yet. Recently one needy situation was brought to my attention. I was privileged to speak to the Association of Accident and Health Underwriters, which is a new organization in Alabama. Its members are very definitely our allies; but, as is so often the case, there have been points of friction between the individuals in that group and some members of the profession. I am sure that this friction has in almost every instance been due to misunderstanding, or, perhaps I should say, a lack of understanding of the overall picture. I am anxious that these points be cleared up so that we may move along together instead of in spite of each other. What I am suggesting is that all groups be contacted as time permits and that with these groups we make every effort to find ways of making our cooperation more effective.

In closing, let us look back at what has been discussed in the last few minutes. We have, in a fashion, looked at some of the philosophy behind this work of public relations, how this philosophy has been put to work during the last few months, and how we hope to push it forward in the days ahead. I have indicated in several ways some of the thinking of the public relations group and some of my own thoughts. I have taken this opportunity also to inform you of some of the loudest complaints by the public and have indicated some of the steps that seem necessary in answering the problems posed in these complaints. But, most of all, I have put into words the challenge and the charge of increased responsibility for the

welfare of our nation. I am more than happy to be associated with you in this additional responsibility of yours and may I

request for the Committee on Medical Service and Public Relations and for myself your continued and, yes, your increased support.

THE ART AND SCIENCE OF ARTIFICIAL INFANT FEEDING

C. KERMIT PITT, M. D.

Decatur, Alabama

The subject, Artificial Infant Feeding, is in nowise new to the pediatrician but for the sake of the general practitioner I believe that it may be worth discussing. Among the many facts revealed by the recent exhaustive survey on child care by the American Academy of Pediatrics¹ is one to the effect that 75 per cent of the child care given in private practice in the United States is provided by the general practitioner. This survey also revealed that almost half of these general practitioners have had less than one month's hospital training in pediatrics. This, of course, does not mean that the average general practitioner does not do a reasonably good job in the care of infants and children, because he of necessity acquires information in the course of his practice. The mortality and morbidity rates in the United States speak well for the men who provide 75 per cent ($\frac{3}{4}$ ths) of the care for infants and children. About 26 per cent of the child care given by the general practitioner concerns the supervision of growth and development, of which a considerable portion involves infant feeding. If this discussion can make infant feeding a little simpler and more pleasant for the busy doctor, its purpose will have been achieved.

The fact that the subject under discussion is Artificial Infant Feeding in no way implies that the writer does not heartily endorse and advocate breast feeding. In most instances breast feeding is the ideal method, and a genuine interest shown by the physician can influence a high percentage of mothers to its use, but even the most ardent advocate of breast feeding finds himself on occasion struggling with the problem of bottle and nipple. In some cases breast

feeding is definitely contraindicated, as in tuberculosis and other chronic debilitating and infectious diseases. For a large number of pediatricians at least, Harry Gordon² and others have shown that breast milk is not the ideal food for prematures. Its protein content is too low and its fat too high. There are, of course, some other contraindications to breast feeding.

Having thus attempted to give a reason for discussing artificial feeding, let us proceed.

What is a satisfactory infant food? A satisfactory infant food is one which is clean, readily digestible, and contains adequate calories, protein, carbohydrate, fat, vitamins, minerals, and water. The normal, well, full-term infant requires about two and one-half ounces of fluid per pound each twenty-four hours. This amount includes milk, water and juice, among other things. The infant who drinks large quantities of diluted milk may refuse other forms of water. This should cause no concern. The same infant will require one and one-half to two grams of protein per pound each twenty-four hours for normal growth and will require approximately fifty calories per pound, more or less, depending upon whether he is newborn or several months old. The average infant will get enough protein, water, and calories if he is allowed to satisfy his appetite with any one of many commonly used formulae. Supplementary vitamins and minerals should be supplied as indicated. I believe that the man who feeds babies should become thoroughly familiar with a few types of formulae and I shall discuss these briefly.

FORMULAE

The commonest formula used and the most uniformly satisfactory artificial infant

Read before the Association in annual session, Montgomery, April 19, 1949.

1. Hubbard, J. P., and Zibiet, S.: Review of Private Practice: Pediatricians and General Practitioners, Pediatrics 1: 379, 1948.

2. Gordon, H. H., Levine, S. Z., and McNamara, Helen: Feeding of Premature Infants, Am. J. Dis. Child: 73: 442, 1947.

milk is modified cow's milk. Theoretically there is no difference between well boiled cow's milk and any of the standard brands of evaporated milk after the water content has been adjusted, except that evaporated milk usually contains added vitamin D. The vast majority of normal infants thrive on modified cow's milk and the following is an example of a formula for a month-old baby weighing eight pounds: evaporated milk 10 ounces, boiled water 18 ounces. This formula supplies 400 calories, which is 50 calories per pound. It also supplies approximately 25 grams of protein, which equals 3 grams per pound, and it supplies 28 ounces of water, which is $3\frac{1}{2}$ ounces per pound. A comparable formula of boiled cow's milk would be: boiled cow's milk 20 ounces and boiled water 9 ounces. This formula contains no added sugar and is in fact a high protein, low carbohydrate formula. The normal infant, if allowed to satisfy his appetite with this formula, will grow and do well. I prefer to add extra carbohydrate only for the sake of preventing constipation. A large number of infants require no extra sugar. For those babies who are constipated on milk and water alone, the following may be used: evaporated milk 8 ounces, boiled water 15 ounces, and Karo 2 tablespoonsful. This formula supplies 440 calories, which is 55 calories per pound. It also supplies 20 grams of protein, which is approximately $2\frac{1}{2}$ grams per pound, and it supplies 23 ounces of fluid, which is approximately 3 ounces per pound. A comparable cow's milk formula would be: boiled cow's milk 16 ounces, boiled water 7 ounces, and Karo 2 tablespoonsful. It is my opinion that the texture of the baby's stools should be maintained with the formula. I deplore the regular use of cathartics and enemas. As stated above, when the baby's stools remain soft enough, I prefer that no extra carbohydrate be added, but when there is a tendency toward constipation the ideal method of control is extra sugar. The carbohydrates produce softening of the stool by fermentation, and, in the order of increasing fermentability, they are: dextrin (example, Dexin), the dextrin-maltose mixtures (Karo and Dextrin-Maltose), lactose (milk sugar), and malt soup extract. A large number of infants will grow well and have normal stools without any of these

sugars. Others who have a slight tendency toward constipation may require dextrin, while the more constipated will need either lactose or malt soup extract. Practically speaking, most stools can be kept soft enough with Karo, lactose, or malt soup extract.

High protein, low fat, low carbohydrate milk: The majority of cases of infant diarrhea, seen in private practice today, are of such nature that changing the formula to one of low fat and low carbohydrate content is all that is necessary to correct the condition (cases of bacillary dysentery, allergy, parenteral diarrhea, and perhaps epidemic diarrhea of the newborn are exceptions). Several milks which fill this requirement are available. Some of these are skimmed, boiled cow's milk, Hi-Pro, powdered protein milk, and Dryco. Most cases of diarrhea seen in private practice will clear readily when one of these milks is given. The high protein formula should be continued until normal stools have been passed for several days. Then the regular formula may be resumed.

As stated before, Harry Gordon and others have shown that breast milk is too low in protein to be the most satisfactory food for the premature. Any one of the high protein milks mentioned above, with some added carbohydrate, makes a satisfactory premature food. Grover Powers³ has for many years successfully fed prematures on half skimmed cow's milk with added carbohydrate. Recently, Gordon, in a comparative study of the weight gain of premature infants on different types of formulae, showed that best gains were made by infants on half-skimmed milk with added sugar. There is at present a very satisfactory half-skimmed milk marketed as a powder.

For the baby who is allergic to the protein in cow's milk, boiling may reduce the allergenic property, so that boiled cow's milk or evaporated milk may be used. Many babies who are allergic to cow's milk cannot take either of these. For such cases, one of the proprietary milks such as Mull-Soy or Nutramigen may be used. These

3. Powers, G. F.: Some Observations on the Feeding of Premature Infants Based on Twenty Years' Experience at the New Haven Hospital, *Pediatrics* 1: 145, 1948.

milks are usually well tolerated and solve the problem satisfactorily. The occasional baby who is not allergic to the casein in cow's milk but to one of the lactalbumins may respond well to goat milk.

FEEDING TECHNIQUE

Once having decided upon the type of milk to be used, the doctor must instruct the mother as to proper feeding technique. To be happy, a baby must be fed an agreeable formula at reasonable frequency, being held in a suitable position, with a free flowing nipple, and be allowed to consume whatever amount he desires in a reasonable period of time. When grandma fed the baby, either from the breast or bottle, she fed him whenever he cried and appeared to be hungry. As you know, grandma's baby was well known for his "three months colic" and his ability to make grandpa walk the floor. As the practice of pediatrics became something of a specialty, there was a tendency for the baby to be cared for on a very strict schedule, so that infant feeding became a matter of watching the clock and offering the baby a formula of percentages. Thus, no matter how hungry the baby became, he was allowed to cry until the clock indicated feeding time. Then he was fed just the amount that the doctor had figured was good for him. Whether it satisfied his appetite or not was not much considered, but there was great consternation if all of the feeding was not taken. There were obvious disadvantages attending this type of infant feeding and now we are tending to revert to the so-called "self demand" schedule. Aldrich and other eminent pediatricians are advocating feeding the baby whenever he is hungry, with no regard for schedule or regularity. In my opinion, neither the Spartan methods of yesterday's pediatrician nor the anarchy of his brother today is the way to feed an infant. There is a middle ground. Of course I think the baby should be fed when hungry, but who is to say when he is hungry? About the only indication of hunger given by a baby is crying, and even Dr. Aldrich⁴ has shown that hunger is only one of the many causes for crying and not the most common cause. So if the baby is to be fed when he is hungry, someone must decide whether he cries because of hunger or for

some other reason. This is not always an easy decision for the doctor to make and I believe it to be no easier for the mother. Consequently, when the baby cries, if the mother has been instructed to feed him when he is hungry, she feeds. Thus she feeds often when he is not hungry, his stomach is always loaded with milk, the true cause of crying is often ignored, he is seldom allowed to become truly hungry, he only takes a small amount at each feeding, and is soon dissatisfied again. There is no consistency, and confusion reigns—and the baby cries.

There is, I say, a middle ground wherein is neither Spartanism nor anarchy, a middle ground where the baby has freedom of demand, tempered with the security of consistency, and the mother has some guide posts for action. The average newborn baby weighing above three pounds empties his stomach of milk in about three hours. It may take slightly more time or a little less, but that is about the usual time. If he is regularly fed more often than at three hours, his stomach always contains milk and he is seldom tempted to feed vigorously. He is often fretful, "colicky," and a feeding problem. The normal baby should be allowed to feed any time he wakes and cries, if it has been three hours or longer since the last feeding. He may be occasionally offered a feeding at a slightly shorter interval, but if he is consistently fed at intervals shorter than three hours, he will become a problem of crying. If the formula is suitable, if the baby is allowed to take all the milk he desires at intervals of three hours or longer, and if the stools are normal, excessive crying indicates a search for causes not related to feeding.

COLIC

Colic is a fact, but I do not believe in the mythical "three months colic" which all parents must endure with good grace. Colic, or intestinal cramp, definitely occurs in babies, but there is always a cause which can usually be eliminated. Colic is practically always caused by one of five conditions. They are: loose stools, improper feeding technique, allergy, constipation, and hunger. The majority of cases are caused by loose stools or improper feeding technique. I would not say that every baby who has diarrhea has colic, but I feel sure

4. Aldrich, C. A., et al.: The Crying of Newly Born Babies, *J. Pediat.* 28: 665, 1946.

tuberculin test, along with the lack of response to therapy, changed our diagnosis to tuberculous pneumonia. (The other twin also had a markedly positive tuberculin test.) A search was begun to find the source of the infection and the Negro cook's sputum was found to be loaded with tubercle bacilli.

The penicillin was discontinued and dihydrostreptomycin (0.3 gm. daily, single dose) was started, along with promizole (0.5 gm. b.i.d.).

11/27/48—At this time, another x-ray of the chest showed mottled parenchymal infiltrates around each hilum and down each lower bronchial tree, which is a much larger area of involvement than in the previous film. These findings are consistent with childhood type of tuberculosis; however, this, together with a pneumonitis, cannot be ruled out on this film. He was steadily getting worse and on 11/30/48 his temperature was 105.6° and he was semi-comatose. White blood count 5,850, polys. 9%, lymphs. 85%, monos. 5%, eosinophils 1%, hb. 54%, red blood count 2,480,000. Two hundred fifty (250) cc. of citrated blood were given intravenously. We began to doubt our diag-

nosis at this time, as we thought the child was too sick for uncomplicated tuberculosis (spinal fluid, normal).

12/3/48—The temperature began to drop and was normal in 2 days and remained so. The child's general condition was good.

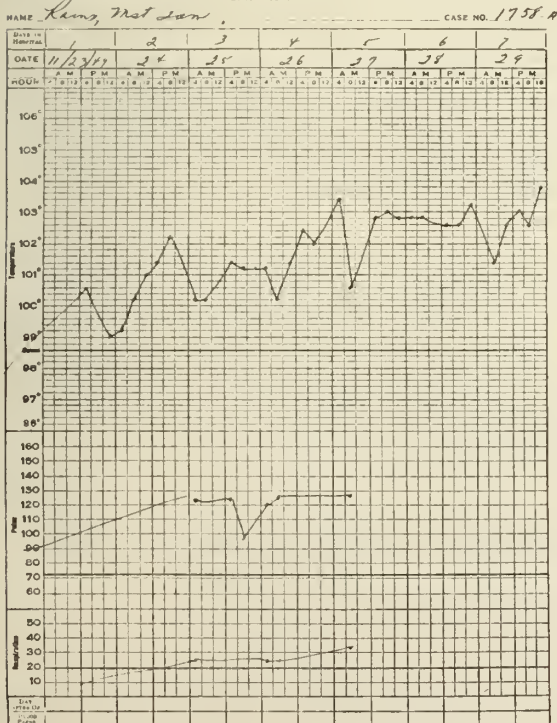
12/7/48—"X-ray of the chest shows marked clearing of the previously reported infiltrate. Residual amounts remain. These findings indicate that a great part of the infiltrate was pneumonia." He was discharged with a normal temperature on the 15th day. He was seen on 12/14/48 and was doing well, having had no fever since discharge. He returned again on 12/31/48 with a temperature of 102.6° and swelling of both parotid glands which had been enlarged for 1 week. White blood count 23,000, polys. 9%, lymphs. 91%. He was referred for blood and bone marrow studies.

1/5/49—Red blood count 1,730,000, hb. 48%, white blood count 10,000, polys. 3%, lymphs. 97%, sedimentation rate 40 mm.-1 hr. "There was almost an absence of platelets and some abnormal lymphocyte-like cells that could not be adequately classified."

Bone marrow:—"The smear from the sternal marrow showed a complete replace-

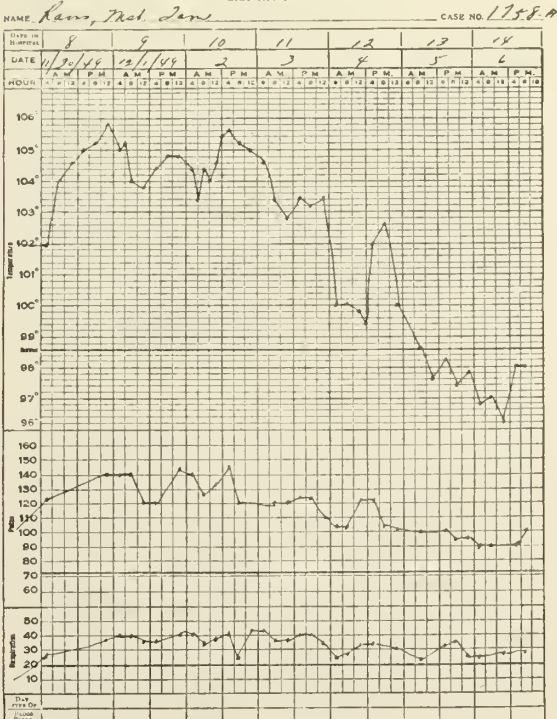
Holy Name of Jesus Hospital
Gadsden, Ala.

GRAPHIC CHART



Holy Name of Jesus Hospital.
Gadsden, Ala.

GRAPHIC CHART



ment of the normal marrow elements by round, primitive-appearing cells with a deep cytoplasm, scattered fine azurphilic granules, and a nucleus which occupied the greater part of the cytoplasmic body. It was interpreted as an acute leukemia, probably of the lymphoblastic type."

He died January 9, 1949.

Autopsy done by Dr. J. A. Cunningham, 1/9 '49.

GROSS ANATOMICAL DIAGNOSIS

1. Findings consistent with acute leukemia. These gross findings are:

A. Hemorrhagic consolidation of the right upper lobe.

B. Petechial hemorrhages throughout both lungs.

C. Petechial hemorrhages on the epicardium.

D. Hepatomegaly and splenomegaly.

E. Moderate abdominal and thoracic lymphadenomegaly.

F. Leukemic infiltration of both kidneys.

G. Generalized mild hemorrhagic diathesis, manifest particularly at the points of venepuncture and marrow aspiration.

H. Generalized pallor.

MICROSCOPIC DIAGNOSIS

1. Acute leukemia with infiltration of the vertebral and sternal marrow, kidneys, and questionable infiltration of the periportal spaces of the liver.

2. Marked pulmonary edema and hemorrhage into the upper lobe of the right lung.

N. B.—The mechanism of death in this patient was undoubtedly pulmonary, and it is interesting that this child started off with an episode resembling pneumonia. This was probably the same type lesion as found at autopsy which consisted essentially of a very profound and remarkably focalized edema. The extravasation of red cells may well have played a role.

External Examination

The body is that of a well-developed and moderately well-nourished white male child whose overall body length is approximately 99 cm. The skin surfaces are somewhat pale and have a slightly yellowish cast. There is some excoriation of the lower lip. Around the point of venepuncture on the left arm there is some bluish discoloration. The same phenomenon is noted over the site of sternal puncture. On the left forearm there is an area of discoloration, approximately a centi-

meter in diameter, from a tuberculin test. Palpation of the axilla, groin, and epitrochlear region reveals a few lymph nodes. None of these appear remarkably enlarged. Head: The ears, nose, and mouth are essentially negative except for some enlargement of the tonsils. The pupils are equal, round and regular.

Peritoneal Cavity

On opening the peritoneal cavity the most striking feature is the liver's lower edge which is sharp and extends some three and a half fingerbreadths below the costal margin in the midclavicular line. The spleen is also enlarged and presents its edge at the upper margin of the abdominal cavity. The mesenteric lymph nodes are somewhat enlarged and all of them have a distinctly reddish cast. The abdominal viscera are normally placed. The diaphragm is intact and is at the level of the fifth rib on each side. The appendix hangs over the pelvic brim and shows nothing of particular note.

Pleural Cavities

In the right pleural cavity there are some fine fibrinous adhesions. The visceral pleura over the lungs shows some petechial hemorrhage on both sides. The left pleural cavity—aside from these petechiae—is not remarkable.

Pericardial Cavity

The pericardial cavity contains no abnormal fluid. At the apex of the heart there are a few small petechial reddish-purple areas of hemorrhage.

Heart

The heart weighs 90 gm. The epicardium is smooth and glistening. The myocardium shows nothing of particular note. The endocardium is smooth and glistening. The valves are soft and pliable. The coronaries are widely patent and it is noted at this point that the blood in all the cavities is watery thin and does not clot.

Note: The weight of the heart is rather surprising as it is somewhat larger than usual—but the child in general is noted to be quite large.

Lungs

The right lung weighs 200 gm. The entire upper lobe is a reddish, firm, consolidated structure which, on section, presents a glistening gray-red cut surface. The lower and middle lobes are moderately well

aerated, although there seem to be spotty areas of consolidation. The most striking feature of this lung is the upper lobe's consolidation and the numerous petechial hemorrhages over the entire pleural surface. The pulmonary vessels are not remarkable. The bronchi contain some watery, blood-tinged fluid.

The left lung weighs 110 gm. It is well aerated, pinkish-gray, with speckled areas of petechial hemorrhage over the pleural surface. The pulmonary vessels and bronchi on this side are essentially similar to those already described.

Liver

The liver's weight had to be estimated and its approximate weight was judged to be around 750 gm. On section the lobular markings are distinct. There is no infiltration noted. The surface is somewhat congested. The capsule is not thickened. The gallbladder is filled with some dark-green bile. The bile ducts—both intrahepatic and extrahepatic—are essentially negative.

Spleen

The spleen weighs 130 gm. This is approximately three times the normal size. The capsule is not thickened. The cut surface presents in general a uniform red surface, but there are areas of increased consistency. These are irregular in outline, situated in the middle of the spleen, and average approximately 2 cm. in diameter. They are not readily visualized and more easily palpated. One has the distinct impression, however, that they represent another type of tissue and perhaps an infiltration by leukemic cells.

Gastro-Intestinal Tract

The gastro-intestinal tract is remarkably negative throughout its entire course.

Pancreas

The pancreas weighs approximately 55 gm. On section it presents the usual glandular, lobulated appearance of the normal pancreas.

Adrenals

The adrenals together weigh 32 gm. On section the cortex and medulla are well defined. There is nothing of note visualized.

Kidneys

The kidneys average 96 gm. a piece. On section the corticomedullary markings are well defined. There seems to be some slight

pallor in the region of the cortex. Most noteworthy, however, are the small areas of leukemic white infiltration in both the medulla and cortex, with one fairly large area—6 mm. in diameter—situated just beneath the capsule of the left kidney. There are numerous smaller areas of white infiltration, averaging 2 mm. in diameter, scattered throughout both kidneys. The ureters are not remarkable. The renal pelves show nothing of note.

Pelvic Organs

The bladder and prostate are not remarkable.

Aorta

The aorta is a soft, elastic structure. The intimal surface is smooth and white.

Bone Marrow

The bone marrow from the vertebral column is dense and red. Aside from the density it has the appearance of a normal marrow.

A section is taken through the sternal marrow. Again one notes the relatively normal appearance of the marrow except for its slightly increased density.

Thymus

The thymus is not enlarged, and in fact it is demonstrated with some difficulty.

MICROSCOPIC EXAMINATION

Heart

Section through the heart shows essentially normal epicardium with a beautifully preserved visceral pericardial lining.

Lung

Section through the lung shows a distinct extravasation of red cells in the subpleural spaces, and at one point there is some fibrin deposition on the surface of the pleura. The alveolar spaces are well filled with air.

There is some slight infiltration around the bronchi by round cells and there is some slight edema. A second section, through the apical lesion, shows the extensive consolidation, and shows this to consist in the main of edema fluid which completely fills most of the alveolar spaces. There are also scattered areas of petechial hemorrhage, particularly in the subpleural spaces. And again in this loose connective tissue between the alveoli and the pleura there is a marked edema. There is also one area of extensive red-cell extravasation into the alveoli and into the terminal bronchioles. This was undoubtedly

ly the red cell component in the area of consolidation. There is one place in this section where there has apparently been some aspiration of mucus. This stains a somewhat pale purplish-blue.

Liver

Section through the liver shows the liver cords to be essentially normal. There is very little fat in any of these liver cells. Around the portal spaces there seems to be some slight increase in the number of round cells.

Spleen

Section through the spleen shows marked engorgement of the sinusoids with red cells. The follicular architecture, however, is well maintained. There is no clear-cut evidence of leukemic infiltration.

Pancreas

Section through the pancreas shows this structure to be essentially normal.

Adrenals

Section through the adrenals shows nothing of note.

Kidneys

Section through the kidneys shows one focal area of leukemic infiltration in which the interstitial tissue has been largely replaced by round hyperchromic cells—undoubtedly blasts. This area is fairly well focalized. The tubules in the area are undergoing some atrophic change. There is also an occasional area of leukemic infiltration of the connective tissue around the capsule and in the fat in the region of the pelvis.

Thymus

Examination of the thymus shows nothing of particular note.

Lymph Nodes

Examination of the lymph nodes shows a striking maintenance of the follicle structure. The only significant finding is the increase in endothelial cells in the sinusoids and the additional factor of many of the sinusoids being filled with red cells. This undoubtedly accounts for the bluish-red color of the lymph nodes described in the gross.

Aorta

Section through the aorta shows nothing of note.

Bone Marrow

Section through the vertebral bone marrow shows a striking picture. There has been a replacement of the normal red cell element by these round hyperchromic blast cells, but there is surprisingly little crowding, so that on a purely mechanical basis one could not say that the red cells were crowded out. There is a distinct increase in the number of reticulum cells, many of which are phagocytic. Occasional megakaryocytes are seen although they are decidedly less numerous than usual. For the exact morphology of the cells in the marrow, see the description of the original marrow smears with differential count.

Diseases of the Cervix—Irrespective of whether cervical carcinoma does or does not arise as a result of chronic cervicitis, we do know that if mild cervical infection is left untreated it will gradually produce hypertrophy and hyperplasia of cervical tissue, and will spread by way of the lymphatics to contiguous structures and produce any or all of the annoying and debilitating symptoms described previously. Furthermore, the longer an infected process remains in the cervix the greater the degree of hypertrophy and hyperplasia and the more radical the therapeutic measures necessary to produce cure; therefore all cases of cervicitis should be treated vigorously, for appropriate therapy applied early results in less disability, less discomfort, and less radical surgery that the patient will have need of in the future.

There are various methods of treatment advocated for the cure of cervicitis; antiseptics, such as iodine, mercurochrome, silver nitrate, merthiolate, etc., have all been applied locally or injected into the cervical canal or cervix itself in an effort to produce cure. As the infection is always deep-seated, and beyond the reach of these drugs, we believe that this type of treatment is not only ineffectual but time consuming to both physician and patient, and futile. Caustics, such as Philo's paste, have been used and have their advocates, but these are few. The larger number of strictures and the small number of cures resulting from this type of treatment lead us to condemn it. Copper ionization has been championed by others, but this method of treatment has never received much support or use except by a small minority of gynecologists. Sulfa drugs and antibiotics are of value in acute cervicitis but their efficacy in chronic cervicitis is questionable. On our services we rely upon the cautery, surgery, and occasionally, in selected cases, conization; and, when needed, hysterectomy for the cure of chronic cervicitis. The degree of success attained by the use of any or one of the latter methods depends upon the proper type of procedure as applied to the proper type of cervix. —Collins *et al.*, *J. M. A. Georgia*, Sept. '49.

Menopausal Bleeding—Abnormal uterine bleeding may be caused by almost any pathologic condition which can affect the pelvic viscera. Most often it is a manifestation of such benign conditions as fibroids and fibrosis of the uterus, strictures of the cervix, chronic cervicitis with erosion or eversion, and polyps. However, despite the fact that it is less common, the condition most frequently associated with abnormal uterine bleeding by both the layman and the physician is carcinoma of the uterus and cervix.

It is true that considerable advances have been made during the last few years in the methods of diagnosis of normal and pathologic changes in the pelvic organs of women in the menopause, but too much emphasis has been placed on these newer diagnostic procedures. To be specific, the vaginal smear has been considered by some as a definite test for the diagnosis of malignancy of the pelvic organs and many women consult us insisting on being given a test for cancer. Although the vaginal smear is a valuable auxiliary diagnostic measure, it should never be substituted for the time-honored and proved methods, such as careful history, examination with the vaginal speculum, cervical biopsy, and diagnostic curettage.

As soon as the cause has been determined, treatment should be instituted promptly. There is no one accepted method for the treatment of menopausal bleeding which should be employed to the exclusion of all others. The treatment selected should depend on the individual case.

The administration of hormones for the control of abnormal bleeding at, near, or after the menopause, is not only unnecessary but dangerous, because this delays the institution of proper treatment of premalignant and malignant conditions and creates a false sense of security. The value of hormones is even questionable in the functional type of bleeding associated with the menopause.

Since the introduction of radium in 1917, and later roentgentherapy for the control of menopausal bleeding, too much emphasis has been placed on the use of these agents for this purpose. The mere control of menopausal bleeding is no insurance that the patient will have no recurrences and that a premalignant lesion will not progress to a malignancy later. This is an important consideration now when the life expectancy of women is almost 70 years, as these women still have twenty-five or thirty more postmenopausal years of life.

It is true that radiation is effective in controlling bleeding at any age but there are many contraindications to its use. It should never be administered to emotionally unstable women. Its use is contraindicated in women with extensive obstetrical injuries, lacerated and diseased cervixes, prolapse of the uterus, large myomas, or adnexal disease.—*Tyrone, New Orleans M. & S. J., Aug. '49.*

Neglected Diabetic Patients—Unsuspected diabetic patients in the main are adults or in the older age period of life. They may, however, present themselves in the juvenile years. Re-

cently I observed a youngster who had just reached his sixteenth year. A year prior to the time I saw him he complained of weakness and inability to carry on his school work and usual activities. His father has diabetes and checked the son's urine when he checked his own. He found sugar. The boy was placed on a simple restricted diet by his father and all his symptoms cleared up until a week before I saw him. Again he was complaining of weakness, lethargy, inability to concentrate, and other symptoms but he had none of the cardinal symptoms of diabetes, polyuria, polyphagia, and polydipsia. Had this lad's father not been a diabetic patient in all probability he would not have been picked up by the average practitioner because he did not present the usual symptoms of diabetes. He might have been placed upon a tonic and told to return later for observation. While this is not common it does occur. The result would probably have been that he would have developed an acidosis and probably coma before his true state would have been discovered. I had a similar experience many years ago. I saw a young lady who presented symptoms of duodenal ulcer but none of the usual symptoms of diabetes. I had just outlined for her a full schedule of interval feedings when I noticed from the laboratory report that she had a large amount of sugar in her urine. Upon closer questioning she admitted that she had to get up once a night with her kidneys but had attached no significance to it. She did have a family history of diabetes. This experience years ago taught me to pay more careful attention to a patient's anamnesis.

Let none of us think of diabetes only in terms of frequent urination, excessive thirst, excessive eating, and loss of weight. These are later manifestations of an established insulin insufficiency. Let us always keep in mind the possibility of diabetes. It is much more common than we realize, and the early cases, especially in younger people, are those in which treatment achieves the greatest results.

The older patients, particularly the middle aged group and still more especially the obese middle aged group, are the unsuspected diabetic sufferers who are grossly neglected. It may be safely said that roughly 80 per cent of adult diabetic patients give a history of obesity. Dublin and Marks of the Metropolitan Life Insurance Company found that of more than 4,500 diabetic patients aged 20 and over 78.5 per cent of the males and 83.3 per cent of the females were overweight (at least 5 per cent above the average weight for age). A maximum weight of a patient may be sustained for a considerable period of time and there may set in a gradual weight loss with or without concomitant diabetic symptoms. Such patients may complain of loss of endurance; they may complain of just a sense of not feeling as well as usual. Too often these patients are merely given tonics or vitamins or other prescriptions and told to report back for further observation if not improved. Too often we doctors are guilty of not having a simple urinalysis on such patients.—*Sweeney, Texas State J. Med., Sept. '49.*

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"PHYSICIANS—WAKE UP!"

Reprinted from N. Y. State J. Med., Sept. 1, '49.

It is much later than it should be for the individual physician to realize, to have burned into his soul, as it were, that he is in reality two persons in one. He is first a physician, a member of a great profession, legally entrusted with the care of the sick, and, second, he is a citizen of these great United States.

One is as important as the other. If he neglects to exercise his functions as a citizen, here and now, he might, in the not distant future, wake up to find himself not only without rights as a citizen, but also, at the same time, a paid clerk of a bureaucratic government. His great profession, with its ideals and ethical standards, will be but a memory, and his position will be one without honor—without dignity.

A group of moral teenagers are endeavoring to entrap us by misinterpreting the maxim that "the common good has priority over the individual good." Their emotions are unbuttoned, and they have but a slight acquaintance with the commandment, "Thou shalt not bear false witness."

The physician as a citizen should fight for the right interpretation of the above maxim: That, in matters of health, he best serves the

common good who has the liberty to advance and improve the present system of practice. No one knows as well as he what the common good is in this regard. No one knows better than himself the evils that would follow the regimentation of his beloved profession. He, himself, would be transformed from a physician into a filler of blanks, and his ability to devote himself wholeheartedly to his patients would come to a sudden stop.

Far above this, the patient would be an even greater loser.

The combatting of this impending evil cannot be shifted by the physician to the A. M. A., or to his state or county society officials—although these should have his complete support and cooperation.

This is a personal problem of every physician in the United States. This is a patriotic duty. If he has never been in a fight before, he is in one now, whether he knows it or not, and it is a fight to the finish.

If he knows the enemy is advancing along a road that leads directly to everything near and dear to him, he should not ask any one to carry his rifle!

Physicians—wake up!

DUODENAL DIVERTICULA

"The discovery of a case of duodenal diverticulosis with associated leiomyosarcoma prompted a review of our findings in other cases, as well as a review of the literature."

Thus do Dunstan, Lowance, and Jones¹ open their discussion of this subject. The authors further state that they have attempted to evaluate their series of 32 cases, some of which have been followed over a period of years. They also tell us that: "In the series there were 3 groups of cases: those in which the diverticulum or its complications demanded and received surgical treatment; those medically treated; and those with gastro-intestinal symptoms so indefinite that no treatment was advised in this respect." They further state that 6 of their 32 cases were in patients under 40 years of age, which is "a little unusual."

1. Dunstan, Edgar M.; Lowance, Mason I., and Jones, Eugenia C.: The Clinical Importance of Duodenal Diverticula, *South. Med. J.* 42: 460 (June) 1949.

The Atlanta investigators go on to say: "In discussion of these cases the following points should be stressed: (1) Failure of satisfactory visualization on barium study. (2) Difficulty of evaluating symptoms. (3) Generally poor response to medical care. (4) Report of a case of malignancy and one of benign tumor in diverticulum. (5) Variance in opinion of different authors regarding pathology and care of duodenal diverticula."

Four cases were successfully treated by surgical excision.

We read that "in conclusion, the fact that among our group some of the most serious complications were present in undiagnosed diverticula, or were non-apparent preoperatively in diagnosed ones, should lead us to treat this lesion with increased respect."

Dunstan, Lowance, and Jones have certainly done well to call our attention to duodenal diverticula. For some time it has been evident that many such cases have been overlooked and that we are apparently just beginning to diagnose them properly. And, unfortunately, it appears that, at least for the present, our diagnostic acumen has in this respect advanced much further and faster than our therapeutic competence. Surgery involving the duodenum is heroic or drastic, to say the least, and with many or most of these victims in the upper age groups it is frequently out of the question entirely. But it certainly behooves the profession to bear this entity in mind if a correct diagnosis is to be made in many cases in which the symptoms are prolonged indigestion and abdominal discomfort.

NUTRITIONAL USE OF IODIZED TABLE SALT

An educational program to encourage the nutritional use of iodized table salt is forecast in an article appearing in a recent issue of Public Health Reports, a publication for professional public health workers issued by the Public Health Service, Federal Security Agency.

The campaign is being planned by the major producers of table salt, with the advice and cooperation of the medical profession and of government nutrition and health experts.

The article summarizes medical views of the relationships between iodine and health. Written by Dr. William H. Sebrell, of the

National Institutes of Health, Public Health Service, and approved by the American Medical Association and the American Public Health Association, the article will guide the salt producers in the preparation of educational advertising and publicity materials.

The following is a condensed summary of Dr. Sebrell's facts about iodine and health:

The role of iodine in the prevention of goiter has long been known, and iodized table salt has been available for many years. However, the present campaign, while stressing goiter-prevention, is also pivoted on the results of medical research into the significance of "trace" elements—of which iodine is one of the most important—in maintaining general health as well as preventing specific diseases.

The elements are these—iron, copper, phosphorus, zinc and many others could be listed as well as iodine—which are found in minute quantities in the soil and in plants and animal bodies. It is now known that they play essential roles in maintaining cell metabolism and regulating glandular functions, and in other ways. Sometimes individuals fail to get enough of them in their food (sometimes because they are naturally absent from the soil in which the food is grown, or have been leached out by erosion). In such cases serious illness can result—but just as often, or oftener, the result may be lowered efficiency, nervousness, or lack of energy. Too vague for any specific diagnosis, such a generalized malaise may weaken the individual's capacity throughout much or all of his lifetime.

One of the elements which is essential to health is iodine. This is because the thyroid gland, which controls so many major bodily functions, requires iodine for its own proper functioning. When it fails to get enough, conditions can result ranging from goiter to chronic borderline malnutrition.

Failure of the body to get enough iodine for the needs of the thyroid gland can occur for reasons as various as the kind of soil and modern merchandising practices. The soil or drinking water, on the one hand, may be devoid of iodine. On the other hand, people living near seacoasts should, theoretically, get enough iodine from the food available in their communities. But nowadays so much food is produced far from the areas where

it is distributed, that the average housewife cannot be sure that what she buys contains enough iodine for her family's needs.

The thyroid gland takes up iodine from the bloodstream and uses it to form a hormone, thyroxine. This hormone in turn regulates such body functions as heat production, growth of hair, bones and skin, development of the brain, and sexual maturation at puberty.

The thyroid is a large U-shaped gland in the neck on either side of the windpipe. Weighing between one and two ounces, it is usually slightly larger in women than in men.

In function, the thyroid gland is both a factory and a warehouse. Alone among all the bodily tissues, it has an affinity for iodine, which it absorbs and oxidizes. This is the beginning of a complicated chemical process which chemists have studied in the thyroid gland, the end-result of which is the production of the hormone, thyroxine. This hormone is stored in a fluid inside the gland, and released into the bloodstream as needed.

If the supply of iodine is at any time cut off or curtailed, the manufacture of thyroxine stops or slows down. Normally, about 75 milligrams of iodine a year are all that are needed for the proper functioning of the thyroid. Less than this amount means trouble—often in the form of those enlargements of the iodine-starved gland which are known as “goiter.”

Simple goiter is the commonest form. Although rare along seacoasts and not evenly distributed elsewhere, it is found in all parts of the world. It is often associated with periods like puberty, pregnancy or lactation, when exceptional demands for thyroxine are made by the body on the thyroid gland, and disappears afterwards.

Like other forms, simple goiter shows itself as an enlargement of the thyroid as it attempts to manufacture more thyroxine with an inadequate supply of iodine. The fact that it is not malignant is not, of course, a reason for taking it lightly; apart from its unsightliness, simple goiter is presumptive evidence of defective functioning of one or more bodily organs which depend on thyroxine. Moreover, it can—and often does—develop into *toxic* or *poisonous goiter*. It can almost always be prevented by taking

adequate amounts of iodized salt from infancy.

Cretinism is a drastic retardation of mental, physical and sexual development, caused by inadequate, or inadequately functioning, thyroid glands before birth. A similar condition, *myxedema*, results from the inadequate functioning of the thyroid gland anytime after birth. Cretins are found most often in the goiter areas of the world. Thyroid extract, given to them at an early age, results in marked improvement. But it does not always bring about complete recovery; the best treatment of cretinism is in its prevention—by giving the mother an adequate iodine supply before and during pregnancy. Myxedema, fortunately, responds dramatically to the administration of thyroid extract, and usually disappears completely.

Since events like puberty, pregnancy and lactation involve increased demands for iodine—as do infections, certain diseases with fever, poor diet and poor sanitation—attention should be paid to getting proper quantities of iodine even by those who are not concerned with the risk of goiter. In the practice of obstetrics, it has been found that the giving of extra iodine has decreased the number of miscarriages and increased the milk supply of nursing mothers. Many obstetricians are giving additional iodine today to all their pregnant patients. How much fatigue in adolescence is due to iodine-hunger, and could be avoided by adequate amounts of the element, is anyone's guess.

In the United States, two major goiter belts were identified during the First World War from draft figures: one centering around the Great Lakes, the other in the states of the Pacific northwest. In these regions, the soil and water, and consequently the vegetation, are poor in iodine. Smaller goiter regions occur elsewhere throughout the country. There is a striking instance of how one such region was created unwittingly. This happened in the Kanahwa river valley at the turn of the century. The valley population stopped using a crude, coarse salt from local wells at this time, in favor of a highly refined white salt which was shipped in. Unfortunately, along with impurities, all the iodine had been removed from the new salt. By 1922, the goiter rate had risen so rapidly that 60 per cent of the adolescent girls in the valley had goiter.

The effectiveness of iodized table salt in eliminating goiter has been graphically illustrated in Michigan, which lies in the Great Lakes goiter belt. In 1924, the incidence of goiter in Michigan was found to be 38.6 per cent. In this same year, the salt manufacturers introduced an iodized table salt. Four years later, in 1928, the incidence of goiter had fallen to 9 per cent. Several years later, in Calumet, Mich., it was found that 60 per cent of the children not using iodized salt had goiter, and that only 3 per cent of those using iodized salt had it.

Many other methods for assuring everyone an adequate supply of iodine have been suggested, and some have been tried, but there is general agreement that the addition of only 0.01 per cent of iodine to a given quantity of salt to assure that the individual using the salt gets his minimum daily requirement of iodine, which is between 0.15 and 0.30 milligrams a day. Finally, there is no danger in the use of iodized table salt, as the body eliminates any excess of iodine not needed by the thyroid gland.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

TIME

W. A. Dozier, Jr.

Director of Public Relations

When this job was first begun, there was time to sit back and think a bit; but more and more, time seems to be completely elusive. This is not a unique situation, for such is always the case if a job is worth the effort put into it. However, this situation of fighting against the clock to find or make time to do certain things brings to mind a scene from a play that was popular a few years ago. Perhaps the dramatist knew how universally true his lines were. Perhaps those lines were thought to apply only to the character speaking them. The intent is not too important.

The thought contained in that scene is important to us today in this hectic life we are all living. Let us look at it for a minute. The man comes on stage having failed to meet an appointment because he was completely fed up with his present existence. When the woman rails out at him for not doing what he should, the man mistakes her intent and thinks she is angry because he has wasted a little money he had. To this the woman replies that the money does not bother her, it was meant to be spent. The unforgivable part was the waste of time, for it is the most precious thing we possess.

But what has all of this to do with you and public relations? Whenever the medical profession is criticized for not doing something,

one cannot help but view that criticism in the light of time demanded. It is often said that physicians will not take part in civic affairs but they will go to a baseball game. When that is said, the person usually has in mind the thought that one finds time to do the things he wants to do. Perhaps that is true to a certain extent, but there is a time element involved that has not been considered. If you could be a civic leader, and a leader is what is expected, in the same two hours required for the baseball game, the case would be open and shut. However, leadership requires untold time for planning, working with people, and handling details; and it is not just the hour or two seen by the public when you are before them. Time, the most precious of commodities which is consumed, does not become evident to people until they in turn attempt such a job.

The criticism which bothers even more is the next step after the above one. Usually the person goes on to say that the doctor is interested only in money and not in civic activities. Here the person is confusing the relative importance of money and time as did the man in the play. It is a very common mistake made in the minds of many people, and it is a mistake that can never be explained until the criticizer undertakes the job and sees by experience the relative importance of the two commodities.

This pulling out and looking at some of the values of what is demanded of the pro-

fession is of no importance unless some headway may be made in alleviating the trouble. It seems rather impossible to show most people the flaw in their thinking, for one cannot put each criticizer into a position to learn from experience. Nor does it do any good to explain the situation because people learn and judge by experience. Still some answer must be given, and this answer must be in the form of action. One must assume a position of activity and leadership in some

civic movement, but to do so one must often relinquish other activities. One member of the profession cannot do all for the group by being active in one or more civic projects. Each and every one must assume the responsibility of carrying part of the load, the part he can most adequately handle. Time—to find the time, that is the job. To fit the tick of the clock to the work to be done is no easy matter, but it is one that must be handled.

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

Attention, Doctors

Through the generosity and kindness of Dr. Douglas L. Cannon, Secretary of your organization, we, the Woman's Auxiliary to the Medical Association of the State of Alabama, have been given the privilege of space in your State Medical Journal. We appreciate very much being given this opportunity of reaching our membership with news of our work.

We have two small favors to ask of you individually: First, won't you take your Journal home for your wife to read when you have finished with it? Second, if your wife is not a member in our organization, won't you talk to her about it? We feel there is a definite place in our program for the wife of every doctor, and know you will agree that now, as probably never before in the history of medicine, there is work a plenty to be done. If you are a member of the Medical Association of the State of Alabama, your wife is eligible to become a member of our organization. If there is no County Medical Society and thereby no county Auxiliary, she may become a member-at-large, paying dues of \$2.00 a year, payable not later than March 1. Half of this goes to the state organization, and the other \$1.00 to the national organization. After you have discussed this with her, we know she will want to become part of our organization. We are working for you and your interests, and know your wife will want to add her name to our membership list. For further information she has but to get in touch with our Organization Chairman, Mrs. J. G.

Daves, Cullman, or our State President, Mrs. William J. Rosser, 2721 Hanover Circle, Birmingham, Alabama.

Thank you so very much. We know we can count on each of you to grant us these two small favors.



MRS. W. J. ROSSER
PRESIDENT OF THE AUXILIARY
1949-1950

Executive Board Notes

Mrs. William J. Rosser, President of our organization, presided over the Executive Board meeting held in Birmingham on September 8, and all of the state officers, committee chairmen, county presidents and others who were privileged to be at this meeting came away with a great enthusiasm for the work to be accomplished this year.

Mrs. Rosser's aim for the year is that the Auxiliary membership will be no less than 1000 by January 1, 1950. Her goal and the goal of every worker in the Auxiliary is that every doctor's wife become a member of the organization. In this vast field of work there is a place for every doctor's wife, and to fill that place is their responsibility.

The Auxiliary has the highest praise of the Medical Association of the State of Alabama, and is striving to do all that the Association has a right to expect of it. If it falls short, it will not be due to lack of effort or interest.

To accomplish the goal Mrs. Rosser has set for us, we have a job to do. We must, through very careful study and planning, make each county Auxiliary an organization that every doctor's wife will want to become a part of. Few of us in these busy times have time to waste, and few of us are going to make time for any work that is not worth while and interesting.

Let's pull together to put Alabama in the Heart of the South, "The Deep South, that is," out front in every phase of Auxiliary work. To do this we must all belong to this wonderful organization.

At the meeting of the Executive Board Mr. W. A. Dozier, Director of Public Relations, spoke to the group regarding public relations and the Auxiliary. It was most interesting for the officers and representatives at this workshop meeting to know that our Auxiliaries are a most important link between the Medical Association and the public. The suggestions for our programs, as given by Mr. Dozier, would certainly broaden our knowledge of things we should know as wives of doctors.

Our first aim should be that every physician's wife be not only a member but an active member of the Auxiliary, having a definite job to do in Auxiliary work. Don't forget that an idle member is likely to lose

interest. Mr. Dozier assured the Auxiliary that Dr. Cannon is most anxious that all Auxiliaries in the state should make definite use of the State Medical Journal. Your programs and the work you are doing should be known, and the Journal will gladly carry this news for you. For publication in the December Journal your material must be in the hands of Journal representative, Mrs. Fred D. Reynolds, 8 College Street, Montgomery, on or before November 10, and so each month thereafter.

Mr. Dozier suggested that a news letter might be gotten out quarterly, the Auxiliary to stand the expense of paper and mailing, and the Public Relations Department to print and mail these letters to each and every member in the state. If this idea meets with your approval, won't you, the county president, write Mr. W. A. Dozier, Public Relations Director, Medical Association of the State of Alabama, 17 Molton Street, Montgomery? The idea of this would be a feeling of closer relationship between each member and the work as being done throughout the state. Please let Mr. Dozier hear from you at once, as the decision that this will be worth while rests with you.

It is most important that each old and new Auxiliary member know the objects of the Medical Auxiliary. You will find listed below some of the most outstanding objects.

- I. To assist the Medical Association of the State of Alabama:

- A. Conduct a study course for all members.

- B. Conduct a study course for Auxiliary speakers.

- C. Help in the National Education Campaign.

1. Secure resolutions.

2. Distribute literature.

3. Develop speaker's bureau.

4. Build file of members and contacts with other organizations.

- D. Offer services to the Hospital Service Corporation of Alabama.

- E. Become Health Chairman of your various clubs. (In the clubs to which you belong, other than the Auxiliary, ask that a health chairman be appointed if there is not one already, and volunteer as chairman of this committee. You are the logical one for this job.)

F. Form clipping service for Medical Association of the State of Alabama.

II. Advance the cause of preventive medicine. Offer assistance to your County Health Department, P.-T. A., etc.

III. Secure adequate medical legislation:

A. Study needs and proposed measure to fill these needs.

B. Offer services to the Medical Association of the State of Alabama on desired legislation.

C. Disseminate information to other groups on need for specific measures.

IV. Promote good fellowship among physicians' families.

V. Assist in entertaining the state, county and district conventions.

VI. To accomplish supplemental work as may be suggested by the State Medical Association.

VII. Establish and maintain an endowment fund.

You may feel, after reading these many suggestions, that the road is going to be a difficult one to travel. You can't do it all in a year, but keep these ideas before you as you aim at success in your work, and when you have your program moving don't hesitate to call for assistance from the Medical Association of the State of Alabama. Aim high for the success of your Auxiliary. "He aims too low who aims beneath the stars."

Mr. Dozier, in speaking before the Executive Board, asked that we ladies of the Auxiliary please know that the name of our state medical organization is The Medical Association of the State of Alabama, and should always be written of and referred to by that name. As an Auxiliary we should be known as The Woman's Auxiliary to the Medical Association of the State of Alabama. Mr. Dozier pointed out a very definite reason why we should take great care in knowing our correct name.

All officers of the Auxiliary and county presidents who attended the Executive Board meeting in Birmingham on September 8 were happy to receive the Twenty-Sixth Anniversary Yearbook of the Woman's Auxiliary to the Medical Association of the State of Alabama, 1949-1950. Mrs. E. F. Leatherwood, Hayneville, prepared the publication, and did a beautiful job of it.

Mrs. Leatherwood is Yearbook Chairman on the Board, and is a member-at-large.

We only wish that Mrs. Leatherwood might have been at the Board meeting to see the pleasure with which we all received the yearbooks, and to accept in person our thanks and appreciation for her efforts.

New Auxiliaries

Congratulations to our new Auxiliaries, and may your connection with the the state and national organizations be one that you will never regret. We feel we have something for you, and we know you have something for us. We are happy indeed to welcome you into our group, and want every doctor's wife in the state of Alabama to know who you are.

Escambia County—Mrs. George T. Perry, Brewton, President.

Pike County—Mrs. James O. Colley, Troy, President.

DeKalb County—Mrs. Claude D. Killian, Fort Payne, President.

Members-At-Large

The Auxiliary is happy to have the following members-at-large:

Mrs. A. P. Matthews, Ozark (Dale County).

Mrs. J. M. Crawford, Arab (Marshall County).

Mrs. W. E. Stinson, Marvel (Bibb County).

Mrs. A. C. Pratt, Centerville (Bibb County).

Mrs. E. F. Leatherwood, Hayneville (Lowndes County).

Mrs. W. L. Staggers, Benton (Lowndes County).

Mrs. J. J. Kirchenfeld, Fort Deposit (Lowndes County).

It is hoped that it will be convenient for these members to attend the meetings of organized county Auxiliaries nearest to them.

The Montgomery County Auxiliary wishes to take this opportunity to invite Mrs. Leatherwood, Mrs. Staggers and Mrs. Kirchenfeld of Lowndes County to attend its meetings. Ours is a luncheon meeting on the third Friday of each month, October through May (omitting December) at 12:30 P. M. The October meeting will be at the Blue Moon Inn. If at any time these ladies find it possible to attend our meeting, they have but to notify Mrs. H. L. Rosen, President, 1031 S. Perry St., or Mrs. George S. Peters, 1222 S. Hull St., who will make their reservations. Even if on the spur of the moment they find they can be with us it will be satisfactory for them to come.

Hygeia Contest

Alas! the Hygeia contest is on, having begun on September 1, 1949 to close on January 31, 1950. Now comes the opportunity for an Auxiliary in the state to enlarge its financial status by winning one of the prizes offered. The first prize is \$40.00; the second, \$25.00; and the third, \$15.00. Regardless of the size of your Auxiliary you have a chance to win. The groups are as follows: No. 1, with membership of from 1 to 18; No. 2, with membership from 19 to 35; No. 3, with 36 to 99; and No. 4, with 100 and over.

Each county Hygeia chairman has received her contest rules. Don't wait for her to ask for your subscription; contact her and tell her to send you your subscription. Put yourself on her committee to help her get more subscriptions.

Physicians, dentists and Auxiliary members are allowed a special discount on Hygeia. Their rates are as follows: One year, \$1.50; 2 years, \$2.50; and 3 years, \$3.25. Should they wish to give a *gift* subscription this same rate will apply.

When Hygeia is sold to the lay public the rates are as follows: One year, \$3.00; 2 years, \$5.00; 3 years, \$6.50. Should they wish to give a *gift* subscription they may do so for an additional \$2.00 a year.

If you are only vaguely familiar with Hygeia, make it your business to read and know this magazine. You are in for a treat, and you will want others to have it in their homes, rich and poor alike. Your husband should have Hygeia in his office for his patients to read. He too should know what the American Medical Association is telling the people. Hygeia should be in every waiting room where people have an opportunity to read for even a very few moments. Never before has there been such a need for a magazine like Hygeia, when our nation is striving for better health. A rich man is poor indeed when his health is bad, and a poor man has the greatest of all blessings when his health is good. We must protect our health to be right-thinking, happy people, and Hygeia goes a long way in helping us do this. These are things you should know about Hygeia:

1. Hygeia prints authentic health information.
2. Hygeia gives in clear, concise and simple terms scientific knowledge of the medical world that even the school child will understand.

3. Hygeia gives reliable information regarding quacks, faddists and cultists. It is a safeguard against ignorance. The American public squanders more than four million dollars annually on patent medicines.

4. Hygeia is packed with up-to-date reliable health information for the teacher.

5. Hygeia teaches how to form health habits intelligently.

6. Hygeia serves as a text and reference book.

7. Hygeia deals with the simple but fundamental principles of health that affect daily living in homes, schools and communities.

8. Hygeia contains child welfare articles for mothers who are helping their children form health habits.

9. Hygeia gives good sound health advice to the business man and woman regarding how much and what kind of food, exercise, rest and sleep they should have.

10. Hygeia is the medium of conveying to the people, who are not patients of the medical profession, scientific information concerning the prevention of disease.

11. Hygeia is a clearing house for health news and views and health activity in all parts of the world.

12. Hygeia gives health information, but each article emphasizes the intrinsic value of YOUR FAMILY PHYSICIAN.

Did you know all this about Hygeia? You can, but only by being a subscriber. Do your part in putting your county and your state out front in Hygeia subscriptions. It is an honor we shall all enjoy. The value of the magazine warrants every effort you make in widening its circulation.

Helpful Program Hints

Auxiliary programs should be sufficiently interesting to:

1. Attract new members.
2. Increase attendance at each meeting.
3. Stimulate interest in health education.

Auxiliary programs should stress the projects of the Woman's Auxiliary:

1. The promotion of Hygeia.
2. The various activities of the department of public relations.
3. The study of proposed legislation on health.

4. Study of socio-economic problems that confront the medical profession.

5. Social activities designed to bring members closer together in friendly relationship.

6. All activities pertaining to health defense which are approved by the local advisory council.

Every program chairman should have the proper tools with which to do her job. Your

state chairman considers the following publications as essential tools for your work:

1. Handbook for State Auxiliaries, price, \$.25.
2. Subscription to the Bulletin of the Woman's Auxiliary to A. M. A. Issued quarterly, \$1.00 per year.
3. Subscription to Hygeia. Special rate to Auxiliary members, \$1.50 for one year, \$2.50 for two years, and \$3.25 for three years.
4. The addresses of people you will want to contact during the year:
 - a. Miss Margaret Wolfe, Ex. Sec. of The Woman's Auxiliary to The American Medical Association, 535 North Dearborn St., Chicago.
 - b. Mr. Frank V. Cargill, Director of Circulation, Hygeia, The Health Magazine, American Medical Association, 535 N. Dearborn St., Chicago.
 - c. Whitaker and Baxter, National Campaign Directors of National Education Campaign of American Medical Association, 1 N. LaSalle St., Chicago 2.

Montgomery Auxiliary Awards Scholarship

The Woman's Auxiliary to the Montgomery County Medical Society is proud to advise that the Scholarship Fund it worked so hard to set up last year was realized, and is prouder still to tell you that it is being used at this time. Let us introduce to you Miss Theresa Ivy Swinson who was awarded the first scholarship to an Alabama nursing school to be offered by our Auxiliary. Miss Swinson was an honor graduate of Sidney Lanier High School of our city, and immediately following her graduation was employed in the Public Relations Office of the State Medical Association. She was selected over four applicants for the scholarship loan on the basis of comprehensive tests, scholastic ability, personality, aptitude for nursing and character. Mrs. W. T. Brannon, Chairman of the Scholarship Committee, together with Mrs. Irl Long and Mrs. L. R. Gayden serving on her committee, was well pleased that Miss Swinson was chosen for the nursing scholarship. The Auxiliary stands wholeheartedly behind Miss Swinson in this most worthwhile work, and knows she will be outstanding in her accomplishments.



Miss Theresa Swinson, recipient of first nursing scholarship offered by the Montgomery Auxiliary.

The Woman's Auxiliary to the Montgomery County Medical Society will have its first luncheon meeting of the fall on Friday October 21, 1949 at the Blue Moon Inn. Mrs. Wm. J. Rosser, State President, will be honored guest and speaker at the meeting. Mrs. Walter Bragg Smith will also attend the luncheon as an honored guest. Mrs. Smith, who is Executive Secretary of the Alabama State Nurses Association, will give the group some detailed information regarding the program of her organization. Mrs. Smith is very proud of the work that has been accomplished in this field, and after hearing her report the Auxiliary will join in her enthusiasm.

There will be much business transacted at this first meeting, and our program for the year will be thoroughly discussed.

Chronic senile phthisis is a condition which may drag on for years unsuspected, and the patient may come to be regarded as just another chronic bronchitic. The patients and their relatives are often so accustomed to their symptoms, and have had so little help from medicine, that they are averse to again visiting their doctor for a detailed overhaul, and the true state of affairs is only brought to light when some young member of the family develops acute tuberculosis, possibly meningitis, and all contacts are reviewed.—W. A. Lister, M. D., *The Lancet*, April 30, 1949.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

THE PROBLEM OF STREAM POLLUTION

Most of us take water for granted. Like the air we breathe, we know it is there when we need it and give it very little thought. We seldom stop to consider what might happen if it should suddenly cease to exist.

What would happen of course is that we, too, would cease to exist. For water is vital to life. We could not survive long without water. We could survive without food considerably longer than we could stay alive without water. M. Allen Pond, senior sanitary engineer of the U. S. Public Health Service, spoke conservatively when he called it "one of the most important single natural resources." Nor did he exaggerate when he referred to it as something "upon which man depends for his existence."

But water also affects our lives in other ways. It may be, and often is, a vehicle of infection. Our farmers would face financial ruin without it. So would most, if not all, of our great manufacturing plants. So would the millions of Alabamians and Americans who depend upon those plants' payrolls for their livelihoods. A considerable proportion of our people have no other income except that derived from the trapping and sale of fish that live in our inland streams and off our shores. On our rivers and creeks ply boats, large and small, which provide innumerable jobs and carry the food and thousands of other products that we need nearly as much as we need water itself. Politicians have ridden to power and fame upon the political issues those inland streams have raised. Others, taking unpopular sides, have gone down to defeat and a nation's forgetfulness. Millions of city children derive pleasure from wading and swimming in municipal pools. Millions of country youngsters have fun galore from splashing in the modern version of the old swimming hole. The ocean waters that bathe our shores have given the seashore resort an important role in the recreation picture. Through the amusement enterprises that have grown up

at those oceanside resorts, a golden stream of revenue has flowed for many years into our local, state and Federal treasuries. It helps make possible our schools, our public health agencies and any number of other good things. Yes indeed. Water is not only vital to human life but it is also vital, or nearly so, to our economic and civic life.

We heard much from our college professors a generation or more ago about "the cityward drift of rural population." We don't hear so much about that nowadays. But it is continuing. In Alabama, as elsewhere, our cities are growing much faster than our rural sections. And they are growing at the expense of our rural areas. This was especially true during the war, of course, but that trend has merely been slowed down. It has not been reversed. And the continuing centralization of our people in urban centers has brought many problems. Some of them are importantly related to our health.

That concentration of population, for one thing, has raised the potent problem of supplying the water those billowing population centers require. For it must not only be ample. It must also be pure. And, side by side with that problem, is the problem of the proper disposal of the waste and refuse of those densely packed men, women and children. If that second problem is not handled properly, the first may become impossible of solution. For the stream into which a city dumps its sewage may also be the stream from which it obtains its drinking water.

Mr. Pond reminds us that the business of providing our cities and towns with ample quantities of safe water is indeed big business. We have him as authority for the accuracy of some pretty impressive figures. He said in a recent issue of *Public Health Reports*, a publication of the U. S. Public Health Service:

"The waterworks industry in the United States is large. There are now more than 14,000 public water supply systems in the country which provide about 8 billion gallons of water daily to about 85 million people. It is not uncommon for large cities to use the equivalent flow of a size-

able river. The excellent quality of this water is a tribute to our waterworks operators.

"The remaining third of our population obtains its water from individual wells and untreated sources, and it has recently been estimated that 6 to 7 million rural families need either new or improved water supplies."

Mr. Pond discusses some of the problems involved in providing adequate supplies of safe water in the densely populated areas of the East and Middle West. Then he returns to specific water-supply problems. I again quote from his article:

"In many instances, raw water pollution has necessitated extension and elaboration of existing water-purification facilities. In some areas, treatment alone is insufficient to cope with the problem. Boston, New York, San Francisco, Los Angeles and Tulsa, among a number of large cities, have had to reach out at great expense to distant and essentially uninhabited watersheds.

"While the need for water continues with the increase in population and industry, its absolute quantity remains the same, and, in fact, in the terms of usable water, is actually getting less. Unless the trend to more extensive pollution is reversed, drinking water, which is now 'almost as free as air,' will command a premium in the not too distant future.

"Availability of water is one of the principal considerations in the location of industries which use it directly as a commodity as well as in processing. Quality as well as quantity is important. The steadily growing canning industry, for example, could not exist without water. Three gallons of processing water are wasted in packing a No. 2 can of asparagus; a gallon for a can of corn or peas; 7 gallons per can of spinach; and as much as 10 gallons for a can of lima beans. The production of pulp and paper involves the use and wastage of tremendous quantities of water. To produce one ton of soda pulp, 85,000 gallons of water are needed; for one ton of paper, from 40,000 to 50,000 gallons."

Mr. Pond quotes other figures to show how hungrily modern manufacturing needs water. In the textile industry, which means so much to Southern economy, every step from the raw cotton to the attractive afternoon dress or workshirt demands it. To produce 1,000 pounds of finished goods, he says, the plant must have 60 gallons of water for sizing. About 1,100 gallons are needed for desizing. Kiering and scouring demand 1,700 to 3,400 gallons more. Bleaching calls for 1,200 gallons. Mercerizing adds another 30,000 gallons. But that is not all. For dyeing is still to come. That calls for another 5,000 to 20,000 gallons for our hypothetical 1,000 pounds of cloth. (The exact amount depends upon the dyeing process employed.)

That totals up to an impressive amount of water.

Other industrial processes also make heavy demands upon our limited water supplies. For example, every time a refinery turns a 42-gallon barrel of crude oil into gasoline for your automobile or truck, 770 gallons of water are required. That means a ratio of slightly more than 18 barrels of water for every barrel of gasoline

This vast industrial use of water is in sharp contrast to the amount used by us Americans as individuals: The average person is estimated to require only about 50 gallons a day.

Many of us tend to forget an important fact: After water has served its purpose in industry, it does not cease to figure in the American scheme of things. It undergoes a great change. Pure, or relatively pure, before, it may now be literally loaded with impurities. The liquid wastes which it becomes may endanger the health of the whole city, unless they are properly treated. They may turn peaceful waterways where children wade and romp into veritable cesspools. They may produce odors that will make an entire community all but unlivable. The water that flows from an industrial plant may be of so repulsive a taste that hardly anyone will drink it. Other industrial ingredients may leave water temptingly pleasant-tasting but dangerous.

Fortunately, considerable progress has been made in water purification. Water that has undergone serious contamination can be purified. If that were not true, our health picture would be tragically different. The tremendous gains that have been made in recent years in curbing a number of diseases would have been altogether impossible. Typhoid fever, still too prevalent, would still be at or above the high levels that prevailed in our parents' and grandparents' days. Dysentery would still bring death and illness to many more young babies than it is now causing. Diarrhea and enteritis would have stubbornly and successfully resisted the attacks of medicine and public health. Other diseases that have been decisively curbed would be aflame in the land. For, remember, our state and nation have undergone a vast industrial expansion. And this has brought an inevitable increase in

the amount of wastes dumped into our streams.

When industrialization was in its infant days, little water was needed to keep it going. But, as plants multiplied, the demands for water went up many times faster. And so did the seriousness of the stream-pollution problem. Mr. Pond calls attention to that close interrelation in the article already mentioned. He says:

"The pattern of growth of the United States during the past century has wrought fundamental changes in the water resources picture. When water demands were small, so too were the problems of liquid wastes disposal. Natural processes in the streams and coastal waters were adequate to stabilize the sewage and industrial wastes deposited in them. But the situation has changed; modern industrial and domestic water requirements are proportionately many times greater than the growth of population would indicate. The development of new industries which utilize vast quantities of water and discharge tremendous amounts of organic and inorganic wastes; and the greatly increased density of population in a relatively small number of places—the same localities, by and large, in which industry is concentrated—have resulted in the compounding of stream sanitation problems. No longer can streams be depended upon to recover by themselves from the uncontrolled dumping of wastes. Man, who created these problems, now must work for their solution."

Fortunately, man is awake to this new danger. And he is trying to do something about it. The 80th Congress took an important step by bringing the resources of the Federal government into the balance in favor of cleaner streams. Among the many measures it passed was the one known as the Water Pollution Control Act of 1948. It pledges technical and financial assistance and advice to the states in their efforts to solve this problem. Under the stimulus of that act, Alabama set up the Water Improvement Advisory Commission. That group, with the State Health Officer as chairman, has launched a vigorous attack upon dangerous and potentially dangerous streams.

Our streams of water bring us streams of wealth. They assure us many happy hours of recreation. They add immeasurably to our lives in many other ways. But they may also endanger our health. All of us should join the effort to keep this danger at the minimum or eliminate it altogether.

BUREAU OF VITAL STATISTICS
Ralph W. Roberts, M. S., Director
PROVISIONAL BIRTH AND DEATH STATISTICS FOR JUNE 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During June 1949			June Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	6174	**	**	24.5	25.1	26.9
Total stillbirths	213	**	**	33.3	33.5	27.3
Deaths (stillbirths excluded)	2092	1177	915	8.3	8.4	8.4
Infant deaths:						
under one year	265	136	129	42.9	40.2	39.5
under one month	138	108	80	30.4	30.9	29.1
Cause of Death						
Tuberculosis, 001-019	83	38	45	32.9	38.1	39.7
Syphilis, 020-029	15	5	10	5.9	7.5	11.2
Typhoid and paratyphoid, 040, 041					0.8	
Dysentery, 045-048	2	1	1	0.8	***	***
Diphtheria, 055					0.4	
Whooping cough, 056	3	2	1	1.2	3.2	4.4
Meningococcal infections, 057	1	1		0.4	0.8	1.2
Polio-myelitis, 080, 081	1	1		0.4		0.4
Encephalitis, 082-083						0.4
Measles, 085	11	2	9	4.4	1.2	2.4
Typhus fever, 100-108	3		3	1.2		0.8
Malaria, 110-117						1.2
Malignant neoplasms, 140-200, 202, 203†	223	157	66	88.4	79.7	81.8
Diabetes mellitus, 260	31	24	7	12.3	15.5	11.2
Pellagra, 281	3	3		1.2	2.0	2.4
Vascular lesions of central nervous system, 330-334	226	108	118	89.6	75.0	85.0
Other diseases of nervous system, 300-318, 340-398	37	23	14	14.7	12.7	***
Rheumatic fever, 400-402	4	1	3	1.6	0.4	***
Diseases of the heart, 410-443	563	333	230	223.3	208.2	182.5
Diseases of arteries, 450-456	35	21	14	13.9	10.3	7.6
Other diseases of circulatory system, 444-447, 460-468	29	15	14	11.5	5.9	***
Influenza, 480-483	9	4	5	3.6	3.2	4.4
Pneumonia, 490-493	51	24	27	20.2	25.0	24.9
Bronchitis, 500-502	2	2		0.8	0.8	2.0
Appendicitis, 550-553	9	4	5	3.6	4.0	2.4
Intestinal obstruction and hernia, 560, 561, 570	21	15	6	8.3	4.8	7.2
Gastro-enteritis and colitis (under 2) 571.0, 764	29	12	17	11.5	4.4	2.4
Cirrhosis of liver, 581	11	6	5	4.4	7.1	4.4
Diseases of pregnancy and childbirth, 640-689	12	6	6	18.8	19.9	27.6
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	2	1	1	3.1	4.6	2.9
Congenital malformations, 750-759	22	17	5	3.6	4.1	***
Accidental deaths, total, 800-962	139	89	50	56.3	70.2	61.8
Motor vehicle accidents, 810-835, 960	43	34	9	17.0	23.4	17.2
All other defined causes	391	222	169	155.1	198.3	231.4
Ill-defined and unknown causes, 780-793, 795	126	41	85	50.0	50.4	64.2

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the June report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204), and mycosis fungoides (205).

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

AUGUST 1949

Examinations for diphtheria bacilli and Vincent's	265
Agglutination tests (typhoid, Brill's and undulant fever)	1,813
Typhoid cultures (blood, feces and urine)	734
Examinations for malaria	812
Examinations for intestinal parasites	4,622
Serologic tests for syphilis (blood and spinal fluid)	28,994
Darkfield examinations	13
Examinations for gonococci	2,394
Examinations for tubercle bacilli	3,059
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	82
Water examinations	1,807
Milk and dairy products examinations	4,346
Miscellaneous	248
Total	49,189

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	July	Aug.	E. E.* Aug.
Typhoid	5	21	18
Typhus	20	9	57
Malaria	17	22	463
Smallpox	0	0	0
Measles	149	66	37
Scarlet fever	22	19	41
Whooping cough	75	29	104
Diphtheria	16	16	45
Influenza	18	12	39
Mumps	92	30	27
Poliomyelitis	62	35	24
Encephalitis	0	0	1
Chickenpox	16	7	4
Tetanus	2	7	4
Tuberculosis	194	255	255
Pellagra	1	0	6
Meningitis	5	6	7
Pneumonia	96	69	129
Syphilis	1149	1040	1685
Chancroid	20	5	14
Gonorrhea	531	496	653
Tularemia	0	0	1
Undulant fever	1	9	10
Amebic dysentery	0	2	2
Cancer	318	412	194
Rabies—Human cases	0	0	0
Positive animal heads	25	20	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BOOK ABSTRACTS AND REVIEWS

Medicine Throughout Antiquity. By Benjamin Lee Gordon, M. D., Attending Ophthalmologist to Shore Memorial Hospital, Atlantic County Hospital for Tuberculous Diseases and Atlantic County Hospital for Mental Diseases, and Authorized Medical Examiner for Civil Aeronautics Administration, Dept. of Commerce. With foreword by Dr. Max Neuburger. Cloth. Price, \$6.50. Pp. 818, with 157 illustrations. Philadelphia: F. A. Davis Company, 1949.

It has long been known that the healing art is one of the oldest known to man. Yet, by its very nature, it must be as modern as the latest newscast. What many of us have failed to realize is that there is a strong and surprising link between its infant years and its today. Dr. Gordon slaps his readers in the face with that realization as they make their way at an easy pace through his pages.

Is penicillin a brand new agency of life-saving and disease-curing? "Yes," say those in charge of Alabama's syphilis-control program and also thousands of others. "No," says Dr. Gordon, "or at least only in part. The ancients used mold on human skulls which had been exposed to the air and found it helpful in speeding recovery for the injured."

Is medical specialization a Twentieth Century phenomenon? "Yes," say millions of us. "No," says Dr. Gordon, "there were Egyptian eye specialists in the days of the pyramid builders. In

one field at least the ancients out-specialized our present-day specialists. They even specialized in giving enemas."

Dr. Gordon puts in a number of telling plugs for the theory of evolution by reminding us how often the lower animals imitate man when they become uncomfortable, sick and injured: They "refresh their heated bodies by submerging themselves in cold water." They "rub, scratch and change their position to alleviate irritated areas." They "warm their stiffened limbs by exposing themselves to the sun." They "lick their sores and wounds." They "are known to suck or blow on injured parts." Monkeys extract foreign bodies, such as burrs and thorns, from their own bodies. They pick bugs and other parasites off other animals. They have even been known to "stem the flow of blood from a wound by placing their paws over the bleeding and applying pressure," like a World War II first-aider. Sick dogs instinctively "search for certain herbs or grass to produce emesis and purgation." There is even a legend, Dr. Gordon says, about how Hippocrates got his idea of enemas to relieve constipation: He once saw an ibis taking water into its beak and then injecting it into its own rectum.

The author of *Medicine Throughout Antiquity* does not particularly emphasize these things. He just tells about them. Then the reader has his own peculiar reaction to his revelations. Usually it is one of wonder and surprise. They are a part of an extended running narrative. They

are merely incidents in the story of the pre-flint rock era of one of humanity's most valuable sciences.

Dr. Gordon has not made any particular effort to dramatize that story. He has left his facts to speak for themselves. And that they are entirely capable of doing. For he obviously has done a tremendous job of research. To aid those who want to go to his book for specific information, he has furnished a first-rate index. But probably most of those who turn to it will do so for the gripping over-all story he tells. He has thrown a powerful light upon a period of medical history that for too long has been kept in the shadows.

John M. Gibson

Blakiston's New Gould Medical Dictionary. Edited by Harold Wellington Jones, M. D., Colonel, U. S. Army, Retired, Contributing Editor, Encyclopedia Americana, Former Director, Army Medical Library, Washington, D. C.; Normand L. Hoerr, M. D., Ph. D., Professor of Anatomy, School of Medicine, Western Reserve University; and Arthur Osol, Ph. D., Professor of Chemistry, Director of Chemistry Departments, Philadelphia College of Pharmacy and Science. Editor-in-Chief, United States Dispensatory. With the assistance of an editorial board and over 100 contributors. First edition. Cloth. Price, textbook edition \$8.50, thin paper edition \$10.75, deluxe edition \$13.50. Pp. 1294 with 252 illustrations, 129 in color. Philadelphia and Toronto: The Blakiston Company, 1949.

It is not easy to review a medical dictionary. However, there are certain tests that may be applied to the volume to determine if it will meet the needs of those who have frequent occasion to refer to it. Does it include the new words that have come into being because of advances in medicine and the allied science? Is there included an easily understood system of pronunciation? Are syllabic divisions clearly indicated? Is the book attractively printed, easily readable, and on a good grade of paper? To these questions Blakiston's New Gould Medical Dictionary gives affirmative answers. It is an attractive publication that may be recommended without reservation.

Douglas L. Cannon, M. D.

A person with tuberculosis has many needs and before we can meet them we must understand them fully. Medical treatment is, of course, the obvious essential. But also to be considered are many factors which have a bearing upon the way a patient responds to his particular therapy. What are these factors? What facilities do our communities have to deal with them? Most patients face a variety of psychological, financial, and personal adjustments which cannot be separated from one another. Emotional reactions to the disease itself influence the acceptance of the diagnosis and treatment.—Robert J. Anderson, M. D., *Pub. Health Rep.*, June 3, 1949.

Anuria—General supportive measures during renal failure are essential. Anemia, which is frequently encountered, may be relieved by transfusions of whole blood. It must be remembered, however, that laboratory studies may be misleading as a result of disturbances in fluid balance. Human plasma or concentrated serum albumin are valuable in correcting hypoproteinemia and maintaining blood volume. In addition, their administration is thought to reduce endogenous catabolic processes to a certain extent. Gelatin, isinglass and other plasma substitutes have not been used extensively. Cardiac failure secondary to renal impairment is a frequent complication. Prompt digitalization should be carried out at the first signs of decompensation but the usual maintenance dose of digitalis must be decreased during the period of inadequate renal function and low urine output. Aluminum hydroxide by mouth frequently aids in decreasing gastrointestinal irritability and phosphate absorption. Daily caloric requirements are met so far as possible by a low protein, low sodium dietary formula providing approximately one calorie per cc. if the patient is able to take fluids by mouth. Otherwise, dextrose solutions (5, 10 or 15 per cent) in distilled water, as determined by the daily fluid requirement, are usually sufficient. Amino acids either orally or parenterally are contraindicated. Supplementary vitamins, especially B-complex and C, are usually given. The cause of uremia is unknown and the several attempts to relieve azotemia and its sequelae by means of temporary substitutes for the filtering surface of the glomeruli have not received sufficient clinical trial to assess their importance in the management of renal insufficiency. Gastric, intestinal or peritoneal lavage has many limitations and the published reports have not been conclusive. The introduction of means for dialyzing the blood outside the body, the "artificial kidney," theoretically gives greater promise of success in removing the end-products of metabolism from the blood. While the artificial kidney is incapable of performing many vital functions of a human kidney, several investigators have noted dramatic clinical improvement following its use. There is little doubt that external dialysis of the blood will become an important part in the treatment of anuria when technical improvements make its application practicable in the average hospital.

Renal decapsulation for relief of anuria has been used rather indiscriminately in the past and the results have been inconsistent. There are those who feel that the same results may be obtained from splanchnic block or spinal anesthesia. The basis for splanchnic block lies in the apparent renal angiospasm associated with lower nephron nephrosis and the dual renal circulation demonstrated by Trueta. There is no evidence at hand to indicate that such measures are of value in the treatment of anuria following other renal diseases.—Dawson, J. *Oklahoma M. A.*, Sept. '49.

AMERICAN MEDICAL ASSOCIATION NEWS

RECOMMEND NATIONWIDE PROGRAM TO CONTROL UNDULANT FEVER

A nationwide program to control and eradicate undulant fever in animals has been recommended by the National Research Council, a quasi-governmental organization established by the National Academy of Sciences under congressional charter.

Approximately 4,000 cases of undulant fever (brucellosis) in human beings are reported annually to the state departments of health, but it is estimated that the truer figure would run to at least 30,000 to 40,000 cases annually. Man acquires the disease from drinking unpasteurized infected milk and from contact with infected material from animals.

"A public health problem is posed by brucellosis which cannot be measured in dollars and cents," a special committee of the council emphasized in a report appearing in the October 1 Journal of the American Medical Association. "It appears that satisfactory control and eradication in man are dependent on prevention of his being exposed to infected animals and animal products."

The committee proposed a five-point program including diagnosis of the infection, eradication of the infectious agent, elimination of the susceptible host by immunization, isolation of infected animals, and use of therapeutic measures when and if successful practical measures become available.

An editorial in the same issue of The Journal commented:

"The report deserves consideration not only by all especially interested in the field but particularly by legislative bodies concerned with developing legislation to make the attack on the disease effective."

Approximately 5 per cent of the adult female cattle in the nation are affected by undulant fever, the report, made by Drs. W. W. Spink, C. L. Larson, and C. F. Jordan; veterinarians L. M. Hutchings, C. K. Mingle, and W. L. Boyd; and Alice C. Evans, Ph. D., of Washington, D. C., and Chevy Chase, Md., said.

At least 1,300,000 dairy and 800,000 beef cows are involved, it added. These 2,100,000 infected cattle are confined to about 20 per cent of the herds throughout the country. The total annual loss from decreased milk production, fewer veal calves, and necessary replacements of dairy cows is approximately \$92,000,000.

Packing house surveys indicate that between 1 and 3 per cent of the swine in the country are affected.

The committee recommended that consideration be given to establishing restrictions on foreign imports to prevent introduction of more infection into the country and that the Secretary of Agriculture be authorized to promulgate regulations governing interstate movement of animals affected with or exposed to brucellosis.

A date should be set after which no female cattle or breeding bulls more than six months of age are to be sold or moved, except for slaughter, unless such cattle have been tested for brucellosis and found non-reactive within 30 days prior to the sale; are within certain age classifications and have been vaccinated, identified, and reported; or are in a brucellosis-free accredited herd or area, the committee said.

The report also made recommendations for state-sponsored programs based on plans to be put into effect by voluntary cooperation of livestock owners. All services in connection with control and eradication of brucellosis should be made available to the owners without expense to them so long as funds are available for such purposes, except the handling of their cattle, it pointed out.

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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

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PARKE, DAVIS

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ADMISSIONS TO THE MEDICAL COLLEGE OF ALABAMA

STUART GRAVES, M. D.

Tuscaloosa, Alabama

The two most important factors in making a good medical school are the selection of its faculty and the selection of its students. This discussion has to do with the latter. We are grateful for the opportunity to tell you something of the problems of the Committee on Admissions of the Medical College of Alabama since World War II ended and how the Administration and the Committee have attempted to meet those problems.

It would seem well first to emphasize certain conditions under which any approved medical school must function. To insure recognition for its graduates by boards of licensure of the various states, by the National Board of Medical Examiners, by hospitals everywhere approved for internships and residencies, by the Army, Navy, Air Corps and Public Health Service of the Federal Government, each school *must* be approved by the Council on Medical Education and Hospitals of the American Medical Association and by the Association of American Medical Colleges. These two rating agencies are all powerful. Their standards are high. They are not subject to any ulterior influence. These facts have not been sufficiently appreciated in the past by the authorities of certain medical schools and by the trustees of certain universities and by the authorities of certain states, with

the result that certain medical schools in those states have lost their standing as approved institutions and consequently have been forced to close their doors or to be completely reorganized.

It is much easier to maintain a good reputation than to reestablish a good reputation after it has once been tarnished.

The Medical College of Alabama started in 1945 with excellent standing. It was an expansion of the School of Basic Medical Sciences of the University of Alabama at Tuscaloosa. That school for twenty-five years had transferred to junior standing in more than forty of the best four-year medical schools of America every student who had completed at the University the first two years of the medical curriculum. Of those 100 per cent transfers, less than 0.5 per cent failed to graduate in medicine from those high ranking four-year schools. One reason why the new Medical College of Alabama was so readily approved, according to the report of the rating agencies after their first inspection, was that essentially the same Committee which had had charge of admissions into the two-year school would continue in charge of admissions into the four-year school. That Committee had been free from any ulterior influence and had been allowed to exercise its own best judgment in the selection of its students.

The Medical College of Alabama is an integral unit of the University of Alabama. The University of Alabama belongs to the

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Dean Emeritus and, at the time of the presentation of this paper, Director of Admissions, Medical College of Alabama.

people of this state. It is supported almost entirely by taxation and fees. It is democratic. To the glory of the University, it may truthfully be said that, for 117 years, any resident of this state, who met requirements for admission and who met requirements for promotion and graduation, could gain an education in any curriculum offered, be he rich or poor, share cropper or son of the most influential citizen of the state.

When World War II ended and V-J Day had become history, there was a great scarcity of doctors, especially in Alabama. Suddenly, in contrast to the years immediately preceding, when 84 per cent of the capacity of every medical school had been under contract to the Federal Government for the training of doctors for the armed forces, a great excess of GI men and women were released from the Army, Navy and Air Corps. Educational institutions were swamped by students, many married and aged by the years of the war, all of whom, with the aid of well earned governmental subsidy, were anxious to make up for their delays in preparing themselves for civil life. Many of these students still live in cramped quarters, in trailers, in hastily constructed barracks, even in tents. Almost without exception they are eager, hard working, mature, and mentally and physically above the average. Whereas medical schools during the war had filled their classes with difficulty, they now were overwhelmed with applications from men and women who had seen modern medicine miraculously save lives and restore broken bodies and disturbed minds to normal functioning.

The Medical College of Alabama has shared in this deluge since V-J Day. Last year, throughout America, about five times as many individuals sought admission to medical schools as there were places in all the medical schools of America combined. Every year since V-J Day the applications for admission to the Medical College of Alabama, from residents of Alabama, have been between five and six times as many as the places available in each class. Since V-J Day not a single applicant who was not a resident of Alabama has been admitted to any entering class. Each year approximately 80 per cent of the applicants have been declined because there was not room for them in the next entering class.

This situation has been unprecedented. It has caused bitter disappointment to students and to their parents and to their friends. It has also been the cause of anxiety on the part of the Administration of the University, of the Administration of the Medical College, and of the five members of the Committee on Admissions for Medicine.

Before applications for any entering class have been considered the Dean of the Medical College and the members of the Committee on Admissions have conferred and have carefully considered their problems. As a result certain policies have been established.

Firstly, it was agreed that no applicant would be considered who was not a legal resident of Alabama. No student has been admitted to any entering class since V-J Day who was not such a resident.

Secondly, it was agreed that preference should be given to qualified veterans. The first two entering classes after V-J Day were made up almost entirely of veterans. This policy has aroused criticism on the part of parents and friends of civilian applicants with creditable premedical records, who, through no fault of their own, had not served in the war. There is wide divergence of opinion in regard to this policy. One prominent legislator wrote recently that every place should be given to a veteran. On the other hand, one father of a son, who desired to be the member of the fourth generation of Alabama doctors in his family, simply could not understand why his eighteen-year old son, who had a creditable premedical record, could not gain admission to the Medical College of the University for which his family had paid taxes for generations. Several University trustees agreed with the legislator who felt all places should go to veterans. Another trustee took the point of view that a high grade civilian with superior scholarship should not be automatically penalized because he had been too young to wear a uniform. To those who are legally responsible for the selection of new students it has finally seemed just and fair that veterans should be given preference because, if they had not done their part in winning the war, we would not have the Medical College of Alabama, or the University, or our homes, or our liberty. The debt to veterans can never be paid.

As time goes on, the proportion of qualified veterans will decrease and, conversely, the proportion of civilians will increase. For the class scheduled to enter in 1949 veterans have been admitted with quality-point credit-hour ratios down to 1.8+, whereas no civilian has been admitted with a ratio of less than 2.3. Of the matriculants for the class entering next fall about four-fifths are veterans.

Thirdly, the policy was established of taking as few women as possible. The reason for this has been that about half the women admitted to medical schools in America never practice medicine. That ratio has held in our own Medical College. The most important function of women has been to marry and to rear children. It is hard to see how the world can go on if that role does not continue to be their most important function. When it is considered further that every student admitted means an investment of hundreds of dollars of tax payers' money, over and above tuition, it seems just that state money should be invested preferably in men who are almost certain to render needed medical service to the people of the state. The few women who have been admitted have seemed, when applying, to be fixed in their purpose to practice, but even several of them unexpectedly have married or withdrawn before graduation. While the University is co-educational, and while it is readily granted that women can do as well as men in most fields of medicine, the fact remains that experience has shown that the money invested in a large proportion of the women who have been admitted to medical school has been wasted, as far as service to society is concerned. When the necessarily small size of the class and the great need for doctors are considered, it is believed that the policy to favor men over women for admission is justified. However, a few women have been admitted to each class.

Fourthly, in so far as it can be applied in advance, preference is given to those qualified applicants who seem most likely to engage in rural practice. Every one appreciates the reason for this policy.

With these policies in the background we come now to the actual process of selection. Each applicant files certain general information in writing. This information is care-

fully investigated. Inquiries are addressed, not only to the references submitted by the applicant but also often to others. This information comes to the Committee without carbon copies to the applicant. One or more face-to-face conferences are held with practically every applicant. Every effort is made to ascertain the character, ideals, industry, mental ability and resourcefulness, health and physical fitness, habits, associations, and motivation for medicine of every applicant. If any applicant does not seem desirable in *these* qualities, that applicant is not likely to be selected, regardless. As to scholarship, a certified transcript is secured directly from the registrar of each school in which the applicant has been enrolled. These are evaluated on a uniform basis with three points for each hour of A, two for each hour of B, one for C, none for D. No discrimination is shown in favor of credentials from one approved college over those of another. The Medical College of Alabama is a state institution and credentials from all approved colleges in Alabama are evaluated alike. The division of the total number of quality points by the total number of hours gives a ratio. E.g., a ratio of 2.0 is equivalent to a B average. At the time the Committee meets all applications are arranged in order of those ratios, from highest to lowest, divided into groups respectively for veterans, civilians, men and women. Provided previous investigations have shown that the applicant is satisfactory in the personal qualifications enumerated above, and providing satisfactory grades are offered in the essential pre-medical courses of English, biology, chemistry, mathematics and physics, selections are made in close conformance with scholastic rating. All applications are reviewed by the whole Committee, which devotes most of three days to its principal session.

Criticism of such selections is not infrequent. The unsuccessful candidate says the student with the highest grades does not always make the best doctor. That is readily granted, but the answer is that a careful study of medical school records by a highly qualified, unprejudiced committee of the Association of American Medical Colleges shows that "one of the best predictors of probable success in medical school is the premedical grade point average." This highly qualified Committee of the Associa-

tion, in a Handbook for Advisers to Students Planning to Enter Medicine, published last year after review of fifty-three publications on these matters, submits the following conclusions with regard to the quality of the premedical records and records made in medical studies:

"1. Low premedical records forecast similar records in the medical school.

2. Low records in the freshman medical year forecast infrequent improvement in the latter three years.

3. Excellent records in the freshman medical year are predictive of maintenance of high scholarship in the three latter years of training."

Furthermore, the same study brought this:

"The conclusion to which one is forced is that the sheer amount of undergraduate training is much less important than quality."

There is no perfect method for selection of medical students. Our Committee no doubt has made mistakes. We can only assert that the five members of the Committee, four with many years of experience, have made every effort to select 52 freshmen each year from more than five times

that number of Alabama applicants, without discrimination in favor of the wealthy or socially favored or politically powerful. The Medical College is a democratic institution. It belongs to *all* the people of the state. Its graduates will care for rich and poor, capitalist and laborer, city bred and country bred. Its students are conscientiously selected on merit as carefully as that merit can be evaluated. We believe that method is best for the state and we are confident that method will maintain the present high standing of the Medical College in the ratings of those agencies whose approval it must hold in order to exist.

Moreover, we are confident that fair dealing with students on merit will increase their respect for our Medical College and their loyalty to it, not only in student days but for all their future years. We eagerly look forward to 1950, when, we hope, an enlarged class will be admitted. Meanwhile we are doing our best to help those our school will not hold to gain admission to schools with larger classes, and in this we have had considerable success.

PORTAL HYPERTENSION ITS SURGICAL MANAGEMENT

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The problem of portal hypertension and how to overcome it and thus prevent hemorrhage has engaged the attention of physicians for many years. In 1877, Eck,¹ the Russian physiologist, succeeded in anastomosing the portal vein to the vena cava side-to-side in order to study diseases of the liver and the role which the liver played in metabolism. He suggested that a portacaval fistula might be used to overcome an obstruction in the portal vein. Since that time, the Eck fistula has been carried out on experimental animals many times. According to Whipple,² Vidal claimed to have done this operation for the first time on a human in

1903. The patient lived 14 weeks and died of septic endophlebitis. Following were several other unsuccessful attempts until 1911, when Rosenstein presented the case of a patient upon whom he had performed an Eck fistula five months previously with some relief of her ascites. No doubt because of insurmountable technical difficulties, the procedure fell into the discard until Blakemore and Lord³ revived a non-suture method of joining blood vessels, first reported by Quierolo⁴ in 1893. Quierolo employed a glass tube over which he everted the end of the portal vein and introduced this into the

Read before the Birmingham Surgical Society, March 26, 1949.

1. Eck, M. V.: The Ligature of the Portal Vein, *Voenno Med. J.*, St. Petersburg 1877.

2. Whipple, A. O.: The Problem of Portal Hypertension in Relation to the Hepato-Splenopathies, *Ann. Surg.* 122: 449, 1945.

3. Blakemore, A. H., and Lord, J. W., Jr.: The Technique of Using Vitallium Tubes in Establishing Portacaval Shunts for Portal Hypertension, *Ann. Surg.* 122: 476, 1945.

4. Quierolo, G. B.: Eine neue Methode zur Vereinigung der Venen. *Untersuch. zur Naturlehe des Menschen und der Thiere*, Moleschott. 15: 233, 1893-1895.

vena cava. Blakemore, however, used a vitallium tube in place of the glass tubing of Quierolo and introduced certain other refinements. This contribution to vascular

surgery enabled Whipple and Blakemore to overcome the technical difficulties which had beset this procedure from its inception. The use of vitallium tubes, however, has been abandoned in favor of a suture technique.

The surgical management of portal hypertension can perhaps best be discussed by first describing the anatomy of the system with which we are dealing. The portal system (Fig. 1) normally consists of the splenic, the inferior mesenteric and superior mesenteric veins which unite to form the portal vein. In addition to these main trunks, a number of other tributaries enter the portal system. These include the coronary, the right gastroepiploic, the pancreatico-duodenal, and the pyloric veins. There are numerous modifications of this arrangement (Fig. 2) in the human. The pressure

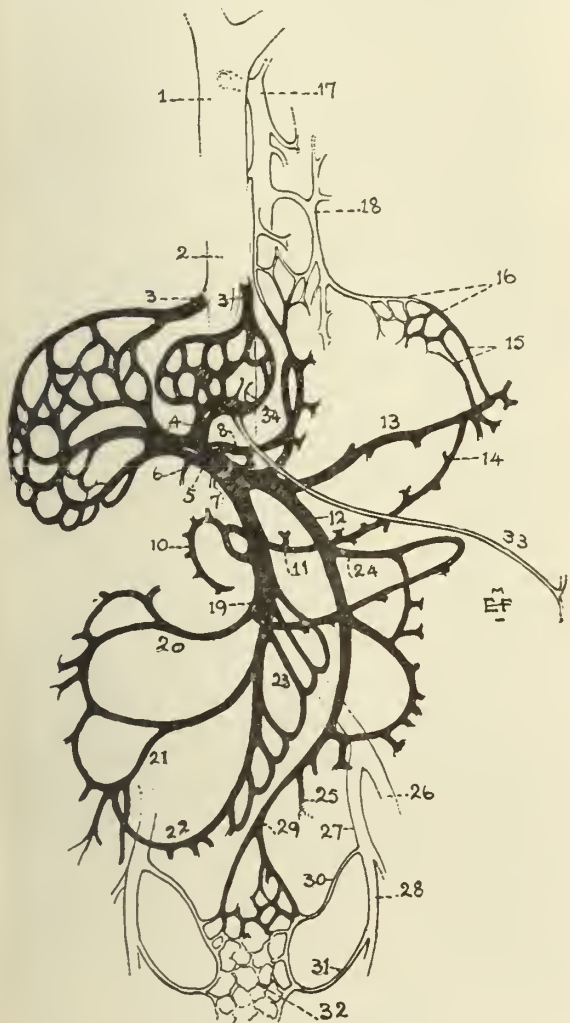


Fig. 1—Portal veins and tributaries and their connections (anastomosis) with the systemic veins: 1. Superior vena cava. 2. Inferior vena cava. 3. Right and left hepatic veins. 4. Right and left branches of portal vein. 5. Portal vein. 6. Cystic vein. 7. Pyloric vein. 8. Coronary vein. 9. Superior mesenteric vein. 10. Pancreatico-duodenal vein. 11. Right gastroepiploic vein. 12. Inferior mesenteric vein. 13. Splenic vein. 14. Left gastroepiploic vein. 15. Short gastric veins. 16. Gastroesophageal anastomosis. 17. Azygos vein. 18. Hemiazygos vein. 19. Middle colic vein. 20. Right colic vein. 21. Ileocolic vein. 22. Ileal veins. 23. Jejunal veins. 24. Left colic vein. 25. Sigmoid vein. 26. External iliac vein. 27. Internal iliac vein. 28. Internal pudendal vein. 29. Superior hemorrhoidal vein. 30. Middle hemorrhoidal vein. 31. Inferior hemorrhoidal vein. 32. Hemorrhoidal plexus. 33. Umbilical veins with round ligament of liver. 34. Ductus venosus.

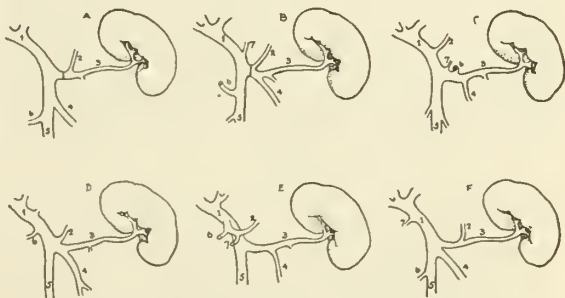


Fig. 2—1. Portal Vein. 2. Coronary Vein. 3. Splenic Vein. 4. Inferior Mesenteric Vein. 5. Superior Mesenteric Vein. 6. Right Gastroepiploic Vein. 7. Pyloric Vein.

A. Hanrahan. B. Spalteholz. C. Gray. D. Paire. E. Sobotta. F. Piersol.

in the unobstructed portal system varies under normal conditions from 60-100 mm. of water, according to Whipple.² When the portal vein is obstructed, the venous pressure in the portal system distal to the point of obstruction rises. Since there are no valves in the portal vein, there is a reversal of flow with the development of the collateral circulation in nature's effort to bypass the portal block. Potential channels connecting the portal to the systemic system begin to form. These include anastomoses between the coronary and esophageal veins, and as the portal pressure increases, esophageal varices form, and hemorrhage ensues.

TYPES OF PORTAL OBSTRUCTION

Portal obstruction may be classified roughly into three types (Fig. 3). It may be intrahepatic, where the obstruction is with-

in the liver substance; it may be extrahepatic, where the obstruction is in the portal vein or its tributaries; or it may be a combination of these two types. The intrahepatic type of obstruction is by far the most common. It occurs most frequently in Laennec's portal cirrhosis in which the periphery of the liver lobule is invaded by fibrous tissue. On rare occasions it may be due to hepatic vein thrombosis (Chiari's syndrome). The extrahepatic type of portal obstruction is less frequent. It occurs whenever the portal vein or one of its tributaries external to the liver is obstructed. It may be juvenile, as occurs when the normal process of obliteration of the umbilical vein extends into the left portal vein and the main portal trunk instead of ceasing at its entrance into the left portal vein. It may be acquired, as occurs when the splenic or portal vein is occluded by trauma, inflammation, or other cause. In addition to the intrahepatic and extrahepatic types of portal obstruction, there may be a combined type in which portal cirrhosis and thrombosis of the portal vein co-exist.

TYPES OF PORTAL OBSTRUCTION

I. INTRAHEPATIC

A) LAENNEC'S PORTAL CIRRHOSIS

B) HEPATIC VEIN THROMBOSIS

(CHIARI'S SYNDROME, RARE)

II EXTRAHEPATIC

A) JUVENILE TYPE (WITH OR WITHOUT CAVERNO-

MATOUS TRANSFORMATION)

B) THROMBOSIS OF PORTAL VEIN

1) TRAUMATIC

2) INFLAMMATORY

3) IDIOPATHIC

III COMBINED

CIRRHOSIS OF THE LIVER AND PORTAL VEIN THROMBOSIS

Fig. 3

INTRAHEPATIC PORTAL OBSTRUCTION

Massive or repeated hemorrhage from esophageal varices is common to all types of portal bed obstruction, but it occurs most frequently in patients with cirrhosis of the liver. About 25 per cent of patients with cirrhosis die as a direct result of hemorrhage. Let us, therefore, consider the intrahepatic type of portal obstruction in which the patient has cirrhosis complicated by massive or repeated hemorrhage from esophageal varices. The diagnosis of portal ob-

struction due to intrahepatic portal block is not difficult. It may be made from the history, physical findings, x-ray evidence of esophageal varices, and liver function studies. The liver function studies which we have found most valuable in determining the degree of liver damage in the order of their importance are: 1. the albumin-globulin ratio, 2. prothrombin time and its response to vitamin K, 3. cephalin flocculation test, 4. bromsulphalein excretion test, and 5. serum bilirubin.

There are other liver function tests, of course, but these are the ones upon which we have come to rely in determining the initial degree of liver damage, and the response of the liver to therapy. The albumin-globulin ratio is perhaps the best test of liver function available. By prolonged feeding with proteins and protein concentrates, this level may sometimes be raised to normal with the disappearance of ascites and marked improvement in the patient's well being. The response of the prothrombin time to prolonged administration of vitamin K is a vital factor in determining whether or not it is safe to proceed with operation. The cephalin flocculation test, while not all that is desirable as a test of liver function, is possibly the best means of determining the degree of activity of the disease in the liver. Coupled with the bromsulphalein excretion test, it gives one a fairly accurate picture of the response of the liver to medical therapy. The serum bilirubin test merely serves as confirmatory evidence of the degree of parenchymal damage.

PREPARATION OF THE PATIENT WITH PORTAL CIRRHOSIS

After a base-line of liver function has been established by means of these tests, the patient is placed upon a regimen which includes feedings of protein, carbohydrate, and fat, forced to the limit of tolerance by mouth. The dietary intake is supplemented by concentrated protein preparations, vitamins, intravenous human serum albumin, and other supportive measures, such as liver injections, blood transfusions and iron. When the patient's liver function studies have become stabilized under this regimen, the decision whether to operate or not can be made on the following basis:

1. Improvement in the albumin-globulin ratio with disappearance or decrease in amount of ascites.

2. Improvement in the prothrombin time to an arbitrary level of 70 per cent or better.

3. Stabilization at low levels of the cephalin flocculation and bromsulphalein excretion tests indicating cessation of activity of involvement of the liver parenchyma.

4. Absence of clinical jaundice.

5. The absence of any other contraindication to surgery, such as pulmonary complications, poor cardiac or kidney reserve and the like.

If the decision to operate has been made, certain precautions should be observed. An intravenous pyelogram will reveal the status of kidney function and particularly the status of the left kidney if a spleno-renal shunt is planned. It is well to have at least 3000 cc. of blood available for transfusion. And it is wise to plan no other operation on the day one chooses to perform this type of surgery for it requires pains-taking and time-consuming effort on the part of the surgeon and frequently uses up the better part of a day.

The choice of sedation and anesthesia for patients with cirrhosis is limited. Morphine and the barbiturates are contraindicated at all times so that one must fall back on the compromise use of codeine or Demerol in small doses or some other substitute for both pre- and postoperative sedation. There is little question that cyclopropane administered by intratracheal intubation is not only better than any other anesthetic but tolerated extremely well and it is not unusual for patients undergoing shunt procedures to endure 6 or 7 hours of anesthesia without noticeable harmful effects.

OPERATIVE TECHNIQUE

The operative approach, of course, depends upon the type of shunt one wishes to employ. At first, either a long left or right rectus incision was employed. As any surgeon knows who has struggled to excise a large spleen through a left rectus incision, exposure is not all that could be desired. I have, therefore, adopted the thoraco-abdominal approach and exposure through this incision is gratifying. The patient is placed upon either the left or right side at a 60 degree angle with the horizontal plane. If a spleno-renal shunt is decided upon, the incision begins at the midline and continues laterally across the left rectus muscle and the tenth rib to the posterior axillary line.

The tenth rib is resected subperiosteally and the pleura and peritoneum incised. The diaphragm is then split in line with the incision. It is important to treat this wound as though it were a plastic incision. Careful hemostasis with fine suture material, gentle handling of tissues, complete and careful coverage of all skin surfaces in the operative field, and a meticulous plastic closure are necessary. Wounds in patients with cirrhosis appear to heal just as promptly per primam as do wounds in normal individuals; but if so much as a centimeter of skin edge overlaps or is unduly traumatized, so that healing takes place by secondary intention, then it is quite evident that the healing process in the cirrhotic patient is greatly delayed as compared to the normal individual.

The next step in the operative procedure is to inspect the spleen, liver, stomach and portal system. The pressure in the portal system is measured by means of a water manometer and Lindeman needle inserted into an omental vein. It is important to have the lower end of the manometer level with the heart and to obtain readings only after it has been observed that respiratory excursions transmit their pressure differentials to the column of water. Three readings are tabulated. These are averaged and the mean taken as the correct reading. A pressure of 250 millimeters of water or above has been arbitrarily set as an indication of portal hypertension. After this fact has been established, a biopsy of the liver is taken, and the operation proceeds. The spleen is mobilized by dividing its ligamentous attachments to the stomach, kidney, and phrenico-colic ligament. The splenic artery and vein are left intact until the splenic vein has been isolated in the hilum of the spleen. The splenic artery is then injected with 1 cc. of adrenalin, the artery is clamped off and ligated and the blood gently milked out of the spleen into the vein. This amounts to an autotransfusion. The splenic vein is then transected as close to the spleen as desired and ligated, and the spleen removed. Careful dissection of the splenic vein down to its junction with the inferior mesenteric vein is carried out. There are many tiny branches to the pancreas along the superior posterior surface of which the splenic vein runs and these must be carefully ligated with arterial silk. After a sufficient length

of splenic vein has been mobilized, the left kidney is exposed, and the renal vein and artery dissected free from the surrounding tissue. A Blalock or Blakemore clamp is then applied to the splenic vein close to its junction with the inferior mesenteric vein. The end of the splenic vein is then excised, triangulated and carefully irrigated with saline. The renal artery is clamped with a single bull-dog clamp; the renal vein with bull-dog clamps on either side of the site chosen for the anastomosis. A diagonal incision is made in the renal vein and this opening is irrigated with saline, using an eyedropper. An end-to-side anastomosis is then performed using a continuous everting mattress suture of 5-0 arterial silk according to the method described by Blalock.⁵ This sometimes requires up to 45 minutes during which time the renal artery and vein remain clamped off. Surprisingly enough, to date we have been unable to detect any evidence of kidney damage postoperatively. The clamps on the renal vein are released first, then the one on the artery, and finally the one on the splenic vein. If there is any bleeding from the anastomotic line, it can easily be controlled with interrupted mattress sutures of arterial silk. The pressure in the portal system is again measured with the manometer. All bleeding points are carefully ligated, and the wound is closed in layers.

If one chooses to perform a portal vein to inferior vena cava shunt, a right thoraco-abdominal approach is made and the ninth rib resected. According to Blakemore⁶ this approach allows the operator to mobilize the duodenum by dividing the hepato-duodenal ligament and to incise the peritoneum directly over the portal vein without the necessity of isolating the common duct. The vena cava is then mobilized sufficiently so that it bulges forward close to the portal vein, enabling the operator to perform either an end-to-side or side-to-side anastomosis of the portal vein to the inferior vena cava. A special clamp for the vena cava is necessary if it is to be anastomosed

to the portal vein. This clamp allows blood to flow through the vena cava while the anastomosis is being performed and makes the original Eck fistula a feasible procedure in the human. The same type of everting mattress suture is employed.

The postoperative treatment of these patients requires some form of anticoagulant therapy to ensure patency of the anastomosis for the first 3 or 4 days until endothelialization of the suture line occurs. Heparin is found to be most suitable and is given either by intravenous drip or by hypodermic at two hour intervals. Fatal hemorrhage has occurred on one or two occasions following these shunt procedures, and the decision as to whether or not to give heparin should be tempered somewhat by the amount of bleeding which occurred during the operation. Supportive treatment otherwise differs little from the usual postoperative care of a patient subjected to major surgery.

EXTRAHEPATIC PORTAL OBSTRUCTION

Extrahepatic portal obstruction occurs in a younger age group than does the intrahepatic type and may be present shortly after birth. The so-called juvenile Banti's syndrome may be an example of extrahepatic portal block. The causative factor appears to be a faulty obliterative process which takes place in the umbilical vein and ductus venosus at birth. This obliterative process which normally ceases at the junction of the umbilical vein with the left hepatic vein may extend into the left hepatic and main portal trunks and even to other radicals of the portal vein in exceptional cases. This sometimes results in what is termed a cavernomatous transformation of the portal vein in which the vein is replaced by a mass of veins running towards the hilum of the liver and diaphragm somewhat resembling a hemangioma. Such a condition may also occur when the portal vein is occluded by trauma, infection, or a spontaneous thrombosis, but it is not invariably present. When a cavernomatous transformation of the portal vein exists, it is never possible to perform a portal vein to vena cava shunt. It would, therefore, seem wiser to plan a spleno-renal shunt in patients with extrahepatic portal obstruction.

Let us consider a case of extrahepatic portal obstruction in a two year old child. This patient was referred to New York Hospital

5. Blalock, A., and Tansig, H. B.: The Surgical Treatment of Malformations of the Heart in Which There Is Pulmonary Stenosis or Atresia, *J. A. M. A.* 128: 189, 1945.

6. Blakemore, A. H.: The Portacaval Shunt in the Surgical Treatment of Portal Hypertension, *Ann. Surg.* 128: 825, 1948.

in 1944 with a history of two previous hospital admissions for intermittent hematemesis since birth. She was found to have extreme anemia, a palpable spleen, and large external hemorrhoids, and x-ray studies revealed esophageal varices. Liver function tests which were abnormal at first soon returned to normal where they remained thereafter. A splenectomy was performed and a liver biopsy taken which revealed normal liver tissue. No attempt was made to perform a spleno-renal shunt inasmuch as Whipple had not yet published his first paper on the subject.

Since 1944 this patient has had 38 admissions to New York Hospital because of hematemesis and melena. Several attempts to perform a shunt operation were thwarted by the fact that this child has a cavernomatous transformation of the portal vein which extends into the superior and inferior mesenteric veins. That this may have been partially due to a congenital process is suggested by the fact that there was also a congenital absence of the gallbladder. If a spleno-renal shunt had been performed at the time of splenectomy, subsequent hemorrhage might have been avoided.

In the light of this and other similar cases, it would seem that congestive splenomegaly is a more apt term than Banti's syndrome.

The differential diagnosis of extrahepatic portal obstruction may be made on the basis of liver function studies. If these tests are normal and the picture otherwise is that of portal hypertension with esophageal varices, the block is obviously in the portal system external to the liver. The preparation of such patients for operation is not as involved as the preparation of a patient with cirrhosis of the liver. The same precautions regarding kidney function, blood replacement, operative technique, and postoperative care must, however, be observed.

The combined type of portal obstruction in which there is both portal cirrhosis and portal vein thrombosis occurs frequently enough to merit some comment. In one of the writer's four cases of intrahepatic block, this condition was encountered. The patient was a 49 year old seaman who presented a typical picture of intrahepatic obstruction due to cirrhosis with massive hemorrhage from esophageal varices. At operation, an end-to-end suture anastomosis of the splenic and renal veins was performed. Unfortun-

ately, the splenic vein was diseased from the long-standing portal hypertension and, furthermore, the renal vein was bifid for most of its course. This led to a great discrepancy between the size of the splenic and the renal veins, making the anastomosis difficult. During the next six or seven weeks, it became evident that the anastomosis was no longer patent. The patient continued to have tarry stools and small hemorrhages by mouth. It was decided to perform a portal vein to vena cava shunt. At the second operation he was found to have a cavernomatous transformation of the portal vein, and no shunt was possible. This patient died on the 18th postoperative day of a massive hematemesis. At autopsy he was found to have cirrhosis of the liver, and thrombosis of the portal vein which had become partially recanalized. The spleno-renal anastomosis was no longer patent.

ANALYSIS OF RESULTS

Since 1943 Whipple² and Blakemore⁶ have reported 58 patients upon whom some type of shunt procedure has been performed for portal hypertension. In this group of 58 cases, there were 42 with intrahepatic block and 16 with extrahepatic block. In 9 instances a portal vein to vena cava shunt was performed. There were 11 deaths in this series, an overall mortality rate of 19 per cent. Some of the patients in this series have been followed for 3 years or more, but no comprehensive report on the follow-up results of this entire group has as yet been forthcoming. Blakemore's latest report states that of 35 patients who had severe hemorrhage prior to operation, 11 give a follow-up history of bleeding. However, 5 of these 11 cases had had splenectomy prior to the shunt operation complicating this latter procedure immeasurably.

Linton, Hardy, and Volwiler⁷ report a total of 15 patients upon whom some type of shunt had been performed for portal hypertension. Seven of these had intrahepatic portal obstruction, and in eight instances the obstruction was extrahepatic. There were 5 deaths in this series, a mortality rate of 33 $\frac{1}{3}$ per cent, all of which occurred in the group with cirrhosis of the liver.

7. Linton, R. R.; Hardy, I. B., and Volwiler, W.: Portacaval Shunts in the Treatment of Portal Hypertension, Surg., Gynec. & Obst. 87: 129, 1948.

The operations performed were 12 spleno-renal shunts, one superior mesenteric vein to inferior vena cava, one inferior mesenteric vein to left adrenal vein, and one inferior mesenteric vein to left ovarian vein. The longest follow-up without hemorrhage was 29 months, and there was one recurrence of hemorrhage in 4 months in a case in which an inferior mesenteric to left adrenal vein shunt had been performed.

Other isolated case reports of successful shunts performed for portal hypertension complicated by hemorrhage have appeared from time to time, but these are the only series of such cases which have appeared in the literature.

Our experience is limited to four cases of intrahepatic portal obstruction in which shunting operations were performed for hemorrhage. It may be of some value to present these cases in detail inasmuch as they serve to emphasize some of the points considered above and demonstrate some of the difficulties of the procedure. These operations were performed at the U. S. Marine Hospital, Stapleton, New York.

REPORT OF CASES

Case No. 1*

A 36 year old white male was admitted to the hospital on February 23rd, 1947, with the chief complaints of hematemesis and melena.

In 1944 cirrhosis of the liver had been discovered during the course of an exploratory operation for jaundice. Two years later, in 1946, he was reexplored because of hematemesis and melena in the absence of demonstrable esophageal varices, and the diagnosis of cirrhosis of the liver was confirmed by biopsy. He continued to have episodes of hematemesis and melena and was readmitted to the hospital in February 1947. At the time of this admission the patient presented the following findings: The skin was pallid, the liver and spleen were enlarged, moderate ascites was present with swelling of the feet and ankles. Liver function studies were as follows:

Serum albumin—2.7 mgms. %.
Serum globulin—4.1 mgms. %.

*Cases 1 and 2 reported by Lord, J. W., Jr.

8. Lord, J. W., Jr.: Arterial and Venous Hypertensive States Benefited by Surgical Intervention, Surg. 23: 550, 1948.

Prothrombin time—85% of normal with a good response to vitamin K.

Cephalin flocculation—1 plus (10-15 units).

Bromsulphalein excretion—20% retention in 45 min.

Serum bilirubin—1 mgm. %.

Moderate anemia, leukopenia, and thrombocytopenia were present. X-ray studies of the esophagus and entire intestinal tract failed to reveal either varices or other cause for his bleeding. Nevertheless, because of his persistent bleeding and a positive diagnosis of cirrhosis of the liver, it was decided to perform a spleno-renal shunt if portal hypertension could be demonstrated at operation. Accordingly, this patient was adequately prepared, and in April 1947 he was explored through a long left rectus incision. At operation only a small amount of free fluid was present. The liver was not visualized due to the dense adhesions from the two previous operations, but the spleen was enlarged to about 3 times normal size. The spleen was mobilized, and the pressure in the splenic vein measured 300 mm. of water. An end-to-end spleno-renal shunt, employing the non-suture technique, was performed. The splenic vein was isolated and the spleen removed. The left renal vein was likewise isolated, and the left kidney was sacrificed. A 10 mm. vitallium tube was inserted into the splenic vein. The vein was everted over the end of the tube and secured with a ligature. The splenic vein was then inserted into the renal vein and secured with a second ligature. After removal of the clamps, blood could be seen coursing freely through the splenic into the renal vein. The patient received 1000 cc. of blood during the procedure and 200 mg. of heparin subcutaneously daily for six days. He had an uncomplicated postoperative course and was discharged from the hospital 8 weeks after operation. At the time of discharge he still had some swelling of the extremities, though this had decreased. The follow-up on this patient reveals cessation of hemorrhage over an 18 months period, disappearance of ankle edema and a gain of sixty pounds in weight.

In September 1947 his liver function studies performed at the Rockefeller Institute were as follows:

Serum albumin—2.9 mgms. %.
Serum globulin—3.98 mgms. %.
Bromsulphalein retention—21% in 45 minutes.
Serum bilirubin—1 mgm. %.
Thymol turbidity—16 units.
Gamma globulin—42 units (normal 9-10 units).

It is noteworthy that, although the portal hypertension has been relieved as judged by the clinical course, the underlying disease in the liver has not been affected.

This is the only one of the four patients in whom we have employed the non-suture method of anastomosis and represents the longest follow-up and best result to date.

Case No. 2

A 49 year old Puerto Rican was admitted to the hospital in April 1947 because of massive hematemesis. His past history revealed an attack of infectious hepatitis in 1944 from which he apparently recovered fully. On physical examination he showed no evidence of recent marked blood loss; there was fluid in the abdomen, and the spleen was readily palpable. The liver, however, could not be palpated. Liver function studies were as follows:

Serum albumin—2.7 mgms. %.

Serum globulin—4.0 mgms. %.

Prothrombin time—45% of normal with a slow response to vitamin K.

* Cephalin flocculation—1 plus.

Bromsulphalein retention—25% retained in 30 minutes.

Marked anemia (RBC 2,360,000, Hgb. 7.6 mgm.), leucopenia (WBC 1,450) and thrombocytopenia were present. Barium studies of the gastrointestinal tract revealed extensive esophageal varices.

He was given intensive therapy over the course of the next 8 weeks with improvement in his liver function studies but continued to have tarry stools. He was, therefore, operated upon on May 1st, 1947, the abdomen being entered through a left rectus incision. The findings at operation consisted of a shrunken, nodular liver, an enlarged spleen, and a portal hypertension measuring 340 mm. of water. An end-to-side suture anastomosis between the splenic and left renal veins was performed. This anastomosis was difficult because the walls of the splenic vein contained hard plaques due to the long-standing portal hypertension and because the renal vein was bifid and much smaller than the splenic vein. The patient had an uncomplicated immediate recovery, but it soon became evident that the shunt was not patent as he began to have melena and occasional hematemesis again. Therefore, in September 1947, four months later, he was again operated upon through a right rectus incision with the hope that a

portal vein to vena cava shunt could be accomplished at this time. Pressure in an omental vein measured over 300 mm. of water. A cavernomatous transformation of the portal vein was discovered, and the operation was abandoned. The patient again withstood the immediate procedure surprisingly well, but expired on the 18th postoperative day of a massive hematemesis. Autopsy revealed almost complete obliteration of the portal vein by an old organized thrombus. The spleno-renal anastomosis was completely occluded.

This case represents the combined type of intra- and extrahepatic portal obstruction. Had a successful spleno-renal shunt been accomplished, further hemorrhage might have been avoided. In this case, the small caliber of the renal vein mitigated against success.

Case No. 3

A 43 year old coast guardsman was admitted to the hospital on September 8th, 1948. He gave a history of 4 previous admissions beginning in 1939 when he was first seen with acute hepatitis and jaundice which was thought due to metal poisoning. He had a second attack of jaundice in 1947 and subsequently had two episodes of hematemesis in June and July of 1948. He was admitted for the 4th time in September 1948 during the third episode of hematemesis. While in the hospital under treatment during his last admission, he had 3 further episodes of hematemesis and melena.

On physical examination the positive findings consisted of an enlarged liver, a palpable spleen, and evidence of recent marked blood loss. There was no ascites. Liver function studies were as follows:

Serum albumin—3.4 mgms. %.

Serum globulin—3.7 mgms. %.

Prothrombin time—45% with slow response to vitamin K, but subsequently rose to 90% of normal.

Cephalin flocculation—1 plus.

Bromsulphalein retention—15% retained after 45 min.

Thymol turbidity—20 units (normal 0-4).

Serum bilirubin—1.4 mgms. %.

Other laboratory tests revealed a hemoglobin of 7.5 grams, RBC 2,300,000, WBC 2,600, and a platelet count of 120,000. Repeated barium studies of the gastrointestinal tract failed to reveal either esophageal varices or other lesions. Nevertheless, because of repeated episodes of hemorrhage, past history of hepatitis, and the impaired liver

function, we felt that the patient had intrahepatic portal obstruction with hemorrhage from esophageal varices.

Operation was performed on November 15th, 1948, two weeks after his last severe hemorrhage. A left thoraco-abdominal incision was employed which gave excellent exposure and made the operation easier than the two previous procedures. The findings at operation consisted of an enlarged nodular liver, an enlarged spleen and a portal pressure of 380 mm. of water. It was elected to perform an end-to-side anastomosis of the splenic to left renal vein. Following establishment of this shunt, the portal pressure measured 280 mm. of water.

The patient had a benign postoperative course except for a wound infection which healed slowly. He was given anticoagulant therapy for 22 days. This is the longest period of anticoagulant therapy we have given. The treatment was prolonged because he developed a wound infection on the sixth postoperative day. Whether the anticoagulant had any effect on the production of his wound infection is problematical.

To date this patient has had no further hemorrhage. He has gained weight (21 lbs.) and strength and feels fit.

Case No. 4

A 54 year old merchant marine officer was admitted to the hospital on November 4th, 1948. He gave a history of two previous hospital admissions for hematemesis and melena in March and October 1948 and was transferred to the U. S. Marine Hospital following the second episode.

On physical examination the patient appeared to have recovered from his recent hemorrhage. The liver and spleen were enlarged, but there was no evidence of ascites. Liver function studies were as follows:

Serum albumin—3.6 mgms. %.

Serum globulin—2.1 mgms. %.

Prothrombin time—70% of normal with good response to vitamin K.

Cephalin flocculation negative.

Bromsulphalein retention—0.

Thymol turbidity—8 units (normal 0-4 units).

Serum bilirubin—1.0 mgm. %.

Other laboratory tests revealed a hemoglobin of 10.5 grams, RBC 3,400,000, WBC 3,550, and a platelet count of 60,000 cu/mm. Barium studies of the esophagus showed extensive varices, and an intravenous pyelogram demonstrated displacement of the left

kidney downward. This patient was thought to have an extrahepatic type of portal obstruction prior to operation which was performed on December 7th, 1948. A left thoraco-abdominal incision was made and the abdomen explored. The liver was markedly enlarged and presented the typical hobnail appearance of cirrhosis. Biopsy of this organ was reported as peribular fibrosis with atypical epithelial proliferation. The spleen was also greatly enlarged and had displaced the left kidney downward. The portal pressure measured in an omental vein was 290 mm. of water. An end-to-side spleno-renal shunt was performed. During the dissection of the splenic vein, the glass suction tip was broken off by an inexperienced assistant, and the splenic vein was lacerated. Repair of this vessel resulted in considerable narrowing of its lumen, and it is doubtful whether the portal pressure was significantly lowered inasmuch as the manometric reading was only some 10 mm. lower than the preoperative pressure. The patient had an uneventful postoperative course and was discharged on the 21st postoperative day.

If this patient has any further hemorrhage, it is planned to perform a portal vein to vena cava shunt. This case demonstrates the necessity for meticulous attention to all details of the operative procedure. So trivial an item as a glass suction tip rather than a metal tip can have serious consequences in the outcome of the procedure.

While our experience with shunting operations for portal hypertension is admittedly limited, it is our belief that this procedure represents the best physiologic approach to the problem yet devised, and we feel that in two of the four patients reported here, the possibility of hemorrhage has been decreased. Lack of experience rather than the limitations of the procedure is blamed for failure in the last case and possibly also in the second case.

Other procedures, such as the use of sclerosing agents directly on the varices, mediastinotomy to produce collaterals between the esophagus and mediastinal vessels, omentopexy, subtotal or total gastric resection, esophagectomy, ligation of the splenic artery, coronary vein, or other vessels in the portal system and splenectomy without a concurrent shunting procedure,

are mentioned in passing only to point out that none of them has proved uniformly successful up to the present time.
121 East 60th Street.

TREATMENT OF MIGRAINE WITH CAFERGONE

LOUIS L. FRIEDMAN, M. D.

Birmingham, Alabama

INTRODUCTION

The purpose of this manuscript is to record the results and experiences with the oral use of Cafergone,* a new sympatholytic agent in the treatment of migraine. Twenty-eight patients with proved diagnoses of migraine comprise the basis of this report.

SELECTION OF PATIENTS

All of the subjects used in this study fulfilled the usual clinical criteria prerequisite for a diagnosis of migraine. Additionally, each patient was tested with nitroglycerin, gr. 1/100, sublingually, prior to the institution of therapy. Without exception the selected cases all experienced a typical "migraine attack" following the administration of this drug. Possible candidates for treatment were eliminated if the use of nitroglycerin in this fashion failed to produce a headache identical to the type described by the patient. When the nitroglycerin test was positive, its effects were manifested in a matter of minutes. Of the 28 patients, 17 were females, and 11 were males. They ranged from 22 to 54 years of age.

METHOD OF TREATMENT

At the very onset of the headache, and whenever possible during the prodromal stage, from 2 to 6 tablets of Cafergone were administered experimentally. Each tablet contains one milligram of ergotamine tartrate in combination with 100 milligrams of caffeine and is sugar coated. Sugar coating is used in preference to enteric coating in order to insure immediate action of the drug. A wide range of individual dosage variation was observed in those patients who were benefited by this treatment. Only after repeated trials was the effective therapeutic dosage determined in many of the cases. The number of tablets required to achieve the maximum beneficial effects depends on the severity of the headache and the time rela-

tionship of the administration of the drug to the onset of symptoms. Results were uniformly better when treatment was instituted during the prodromal or very early stages. In new cases, 2 tablets were administered every 45 minutes until symptoms were relieved or began to subside. Initial treatments were all conducted in the clinic under close personal supervision in order to determine accurately the level of effective therapeutic dosage in each case. Patients were then instructed in home treatment. This is a very important precaution since the dosage required may vary so widely, not only from patient to patient but in each separate attack in the same patient. Characteristically, the patient noticed that relief of the headache was first intermittent and finally sustained. Some used the descriptive term, "waves" to describe this trend of events. With relief of the headache, all of the patients experienced a tight sensation in the head.

RESULTS OF TREATMENT

Five (17.9%) of the patients (Table I) obtained no relief with this form of therapy. In two (7.1%) others the results were equivocal. Twenty-one (75%) of the patients obtained complete relief from their attacks with varying dosages. As a rule, 2 to 4 tablets were sufficient when treatment was instituted early and without procrastination. More severe cases required as many as 8 tablets, especially if treatment was delayed.

TABLE I
RESULTS OF TREATMENT IN 28 PATIENTS

Response	Number of Patients	Per Cent
Complete relief	21	75.1%
Equivocal results	2	7.1%
Failures	5	17.9%
Totals	28	100.0%

UNDESIRABLE REACTIONS TO TREATMENT

Eight patients (28.5%) (Table II) experienced undesirable reactions with the use of

*A preparation by the Sandoz Chemical Works, Inc., New York.

Cafergone. Five of these developed nausea and vomiting. This effect is difficult to evaluate since nausea and vomiting may both be part of the clinical picture of migraine. Judicious use of a parasympatholytic drug, however, is usually effective in combating these undesirable reactions. The drug should be administered when these symptoms occur. In an effort to preclude this possibility, it is the practice of the author to administer a suitable parasympatholytic drug simultaneously with the Cafergone. The beneficial effects of the primary therapeutic agent are not affected appreciably, but the symptoms of nausea and vomiting are usually alleviated or avoided. Three of the 8 patients experiencing undesirable reactions complained of abdominal cramping. Two of these are included in the group which experienced nausea and vomiting, and all were benefited by the same therapeutic or prophylactic use of a parasympatholytic agent. One patient experienced mental confusion and another complained of leg cramping. Fortunately, both of these patients experienced relief of these symptoms with diminished dosage of the drug. In the event that leg cramps and other dangerous vascular phenomena occur with even minimal dosage, continued use of the drug is contraindicated and fraught with danger.

TABLE II
UNDESIRABLE REACTIONS TO TREATMENT
IN 28 PATIENTS

Reactions	Number of Patients	Per Cent
No undesirable reactions	20	71.5%
Undesirable reactions	8	28.5%
Totals	28	100.0%

COMMENTS

Many of the patients in this study who were benefited by Cafergone had suffered from migraine for many years. Various remedies had been tried and, in most instances, with equally variable results. One lady in the favorable response group had suffered from this type of headache for sixteen years. The migraine attacks occurred in relation to the menses in four cases. These patients were likewise benefited by this form of therapy. The administration of additional caffeine in any form was found to augment the effect of Cafergone. All of the patients who responded to Cafergone, likewise, received relief from the parenteral adminis-

tration of adequate amounts of D.H.E. 45* (dihydroergotamine methane sulfonate). In three of the failures, the latter drug was effective when Cafergone failed to produce the desired effects.

SUMMARY

1. A clinical trial with the oral use of Cafergone in the treatment of 28 patients suffering from migraine was conducted.
2. Twenty-one (75%) of these patients obtained complete relief of their symptoms.
3. Undesirable reactions to the drug occurred in 8 patients who were benefited by the drug.
4. The undesirable reactions may be controlled by the use of a parasympatholytic agent or by decreasing the dosage of Cafergone when possible.

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

CASE PRESENTED BY BENJAMIN P. CLARK, M. D.

This patient, a three year old colored female, was first seen at the Children's Clinic on April 25 because of fever and pain in the left ear. Physical examination was essentially negative, both ear drums being normal in appearance. However, the child did have elevation of temperature of 101° rectally. WBC was 9,100 with 53 per cent granulocytes and 46 per cent lymphocytes. Urinalysis showed many pus cells with clumps. Impression was pyuria and the child was sent out on a triple sulfonamide.

When seen again, two days later, the child was unimproved and the urine was unchanged. She was given 300,000 units of procaine penicillin G in aqueous solution and put on 100 mg. of aureomycin every four hours by mouth. The following day the urine had cleared up satisfactorily but the child was still febrile. (101° rectally.) On the 30th the temperature was 103.5° rectally and hospitalization was recommended.

On May 2 (7 days after the child was first seen) she was admitted to the hospital with normal temperature. X-ray of the chest made on admission was read as showing mottled infiltrates in the lung fields consis-

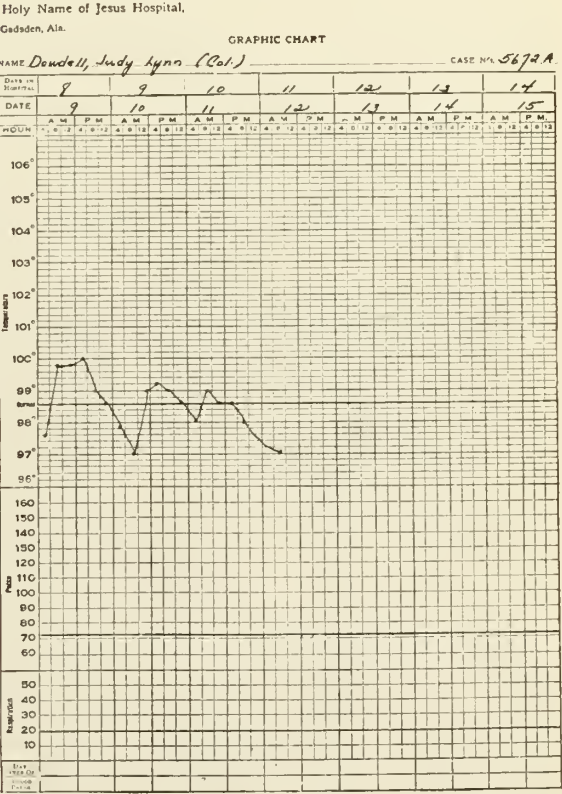
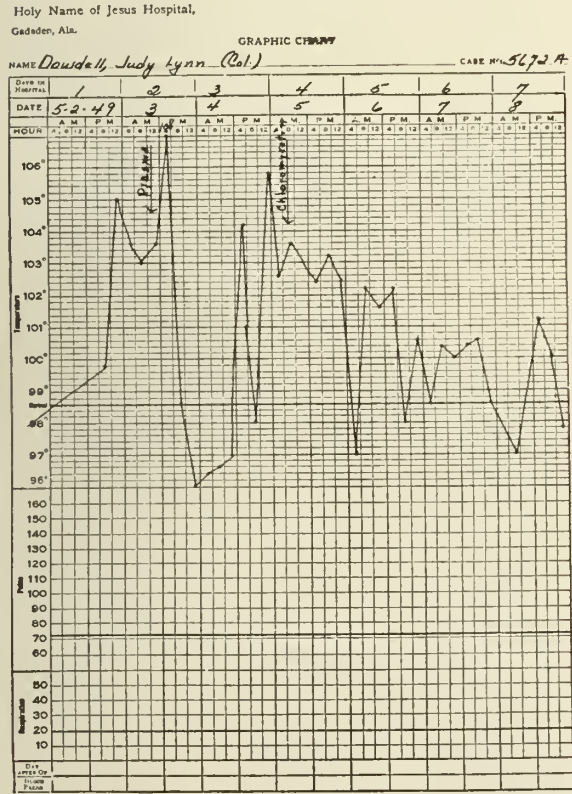
*A preparation by the Sandoz Chemical Works, Inc., New York.

tent with a diagnosis of pneumonitis. She was therefore, on May 3rd, given a transfusion of pooled human plasma. She had a marked reaction following the transfusion, with temperature of 108° rectally. Following the reaction her temperature dropped to normal for about 18 hours and then went up to 104.2°. Routine agglutinations were then ordered and were reported positive for typhoid "O" up to 1:640.

The child was then put on 100 mg. chloromycetin every four hours for 48 hours and then 100 mg. every eight hours for the duration of her hospital stay. She developed some diarrhea which was easily controlled by the discontinuance of feedings. She improved rapidly as the temperature curve will show.

She was discharged from the hospital on the 12th day clinically well and has been followed since in the Clinic. Chloromycetin was continued for a total of 12 days (four days after discharge). This case has been presented to show the results of treatment with chloromycetin, the first drug which has seemed to have a specific curative effect in typhoid fever. Further experience will be necessary before a true evaluation of this new drug in this old disease will be possible.

The possibility that the positive agglutination test might have been the result of agglutins transmitted to the child by the plasma infusion has been considered but it was felt that a titer of 1:640 could not be explained on this basis.



The cause of the high prevalence of tuberculosis in mental hospitals is failure to recognize or seek out cases of tuberculosis among incoming patients who then transmit the disease to other patients during residence in the hospital. The situation can be improved only by segregating and treating the tuberculous patients discovered by survey.—Waldo R. Oechsli, M. D., *Pub. Health Rep.*, Jan. 7, 1949.

The admission of tuberculosis patients to general teaching hospitals on a more liberal basis than has become the custom would do more than any other measure to improve medical education in tuberculosis. In a teaching hospital the mere presence of a tuberculosis section is of educational value.—Carl Muschenheim, M. D., *Am. Rev. Tuberc.*, July 1949.

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A NEW INSULIN

"Specially modified insulin, designated by the manufacturers as NPH 50, is a neutral crystalline protamine zinc insulin with an action intermediate between that of soluble (regular) insulin and protamine zinc insulin. It has been predicted that a preparation of insulin having an intermediate activity in time will replace both protamine zinc insulin and insulin mixtures in the treatment of diabetes mellitus and at the same time will improve as well as simplify the treatment of a complex disease. From preliminary evidence it appears that NPH 50 may be that preparation.

"With the use of insulin mixtures as first proposed by Lawrence and Archer in 1937, the control of severe diabetes was finally accomplished with one injection of insulin a day. The intermediate type of action of the mixtures largely eliminated the glycosuria in the daytime so frequently observed with the use of protamine zinc insulin alone. Following the work of Colwell and his colleagues the exact activity of various mixtures of insulin became well known. The results of treatment by this method in large series of patients have been most gratifying. Nevertheless, this method has projected definite clinical problems because premixed insulins are not stable enough for general

use, and mixing the insulins in the syringe represents a technic which is difficult to teach to many patients. Therefore, many physicians have continued to advise the use of protamine zinc insulin alone in spite of serious objections to it.

"At the Clinic the practice has been to use protamine zinc insulin only for patients who require 20 units of insulin or less a day. Patients who require more than 20 units have been treated with insulins mixed in the syringe. This method has required the expenditure of a considerable amount of time on the part of the staff and the patients. Additional objections to the procedure include (1) increased chance for error in dosage, (2) dislike of some patients for the additional daily inconvenience, and (3) unsuitability for patients with limited intelligence or poor vision. Nevertheless, the reasonably satisfactory control of the diabetes that usually results from properly adjusted tailor-made mixtures has justified their extensive use.

"Attempts to develop a stable insulin with intermediate action have been going on for several years. At least twenty preparations have been studied. The latest and perhaps the most promising of these is crystalline protamine zinc insulin, type NPH 50."

Thus does Kirkpatrick¹ begin his discussion of this subject. The Rochester investigator goes on to tell us that "some time ago we were supplied with limited quantities of NPH 50 for clinical trial. The available information about the product was meager, consisting primarily of preliminary data on determinations of blood sugar in a few treated patients." And "after use of the new insulin for a period of two to six months, each patient was asked for his opinion of the comparative value of NPH 50 insulin and the insulin he had been using previously. At the same time comparison was made between the adequacy of control during and before the use of NPH 50 insulin; this comparison was based on control of glycosuria and avoidance of reactions. . . .

"No untoward effects were noted and no local or general allergic reactions were encountered in these patients.

"Insulin reactions from overdosage of NPH 50 were more easily recognized than

1. Kirkpatrick, Neal R.: Experience with a New Insulin, Proc. Staff Meet., Mayo Clinic 24: 365 (July 6) 1949.

those provoked by protamine zinc insulin. Symptoms most frequently noted with NPH 50 overdosage were hunger, perspiration, palpitation and restlessness."

In Kirkpatrick's concluding paragraph we read that "although our experience is limited we are led to hope from it that the control of diabetes obtainable with this new insulin will prove to be at least as satisfactory as that obtained with the insulin mixtures used before. Control with it is certainly more satisfactory than that obtainable with protamine zinc insulin alone. For control of diabetes of considerable severity, additional soluble (regular) insulin seems to be required. Even so the new insulin is more convenient to use than mixtures made in the syringe of soluble (regular) and protamine zinc insulin. Of these 20 patients only 1 expressed a preference for the earlier procedure."

Kirkpatrick's brief but excellent article is indeed encouraging. True his experience has been limited and it must be extended and confirmed by other observers. But when one recalls that insulin is only twenty-five years old one realizes that progress in the manufacture and use of insulin continues to be made.

DIABETES DETECTION

The intensive Diabetes Detection Drive in Birmingham and Jefferson County last November (1948), carried on with the cooperation of the American Diabetes Association, the Jefferson County Medical Society, and the Birmingham and Jefferson County Departments of Health, was a great success. The hearty cooperation of individual physicians in Jefferson County was particularly effective. One Birmingham general practitioner reported that he had found and had under treatment five hitherto unsuspected cases of diabetes among his patrons, who had become "diabetes conscious" and had brought him specimens of their urine for examination.

The assistance of every physician in Alabama is needed in the effort to find unrecognized cases of diabetes. You may find diabetics among your patrons who can be treated satisfactorily if the diagnosis has been made before complications have developed. If you will ask for a specimen of urine from every patient you treat, from infancy to old

age, and examine it for sugar, you will find diabetics who otherwise may go for years without treatment. Diabetic coma and other complications of diabetes will be rare if physicians will render this service to their patrons. Last year in an Alabama city a lovely young mother was treated by three physicians none of whom examined the patient's urine. When she was in coma, the fourth physician examined her urine and found it loaded with sugar and diacetic acid, but she had been in acidosis too long to be saved by the use of insulin.

CORTISONE

(Reprinted from N. Y. State J. Med., Oct. 1, 1949.)

This new drug, used apparently successfully in the so far experimental treatment of some of the degenerative diseases together with arthritis, rheumatism, and the like, may be processed from plants of the *Strophanthus* family, of which some eighteen or twenty species exist in Africa, Burma, India, the East Indies, and the Philippines. At present quite limited quantities derived from ox bile must suffice for experimental work.

Once again medical science has pioneered what may well be another source of relief for suffering humanity, as, for example, it did in the cases of insulin, penicillin, the sulfa drugs, and countless other substances. There is nothing extraordinary about this. It is the job of medical scientists to do just what has been done in the case of cortisone. But the *discovery* is in some ways possibly the easiest part of a complicated chain of necessary events.

Great quantities of the substance are necessary if large-scale experimental treatment work is to be done. Ox bile, the present source, yields so little that new sources must be found. Apparently, plants of the *Strophanthus* family, or at least some of them, may be a high-yield source. According to the United States Public Health Service, the crude product of the botanic source could be processed in twenty procedures. Chemical synthesis now requires thirty-seven to produce a product of commercial value. The desired end is a cheap, standardized product available in quantity domestically.

The resources of government quite properly should be and are being marshalled,

together with private enterprise, to seek out sources of crude *Strophanthus*. A request to the Budget Bureau for \$1,750,000 reportedly has been made for research into plant sources. Of this amount, \$250,000 reportedly would be spent to find and grow materials, the balance to be devoted to grants-in-aid to promote further research in scientific institutions.¹

Teamwork of this kind in the public interest seems to us to be of the greatest value. In the case of cortisone, the news story of its relation to substances derived from plants of the *Strophanthus* family was written by William L. Laurence, one of the foremost present-day science writers, a factual account free from the absurd emotionalism not infrequently encountered in the products of some other authors.²

The story was followed up by a further account detailing the governmental interest of Dr. Leonard A. Scheele, surgeon general of the U.S.P.H.S., Dr. Norman H. Topping, associate director of the National Institutes of Health, and Mr. Carol O. Carlanson, chief of the Division of Plant Exploration and Introduction, Department of Agriculture.

Development of new plant and mineral resources by the government is highly necessary. In this instance, it promises large-scale supply quickly, and we hope with a minimum of red tape, unnecessary chatter, and official gobbledygook, of material whereby advanced therapy of arthritis by the medical profession and further research into other possible uses of cortisone may be facilitated.

The possible value to industry alone may be visualized if present forecasts of success in the treatment of arthritis and rheumatism by Cortisone are confirmed, since these diseases are among the top ranking causes of disability among older and highly skilled employees.

SAYERS RECEIVES CIBA AWARD

The annual Ciba Award for outstanding work in clinical endocrinology has been awarded this year to Dr. George Sayers. The selection was made by a committee of the Association for the Study of Internal Secretions. It is expected that the work of Dr.

Sayers will have an important use in the study of the effects of cortisone and ACTH in arthritis and rheumatic fever.

Dr. Sayers developed a new and sensitive method for the assay of the adrenocorticotrophic hormone of the anterior pituitary gland. He found that the ascorbic acid and cholesterol content of the adrenal glands varies inversely with the amount of ACTH administered to the test animal. Having established the method, he applied it to the problem of pituitary-adrenal relationships. The interrelation of the pituitary and the adrenal cortex, and the response of this hormonal system to a variety of stimuli, are better understood and can be better studied as a result of his investigations.

Dr. Sayers was born in 1914. He received the degree of M. S. in physics from the University of Michigan in 1936 and the Ph.D degree in physiological chemistry from Yale University in 1943. From 1943 to 1945 he served with the Office of Scientific Research and Development at Yale University and in 1945 became Assistant Professor of Pharmacology at the University of Utah.

The Ciba Award is limited to men not over 35 years old and is given for meritorious accomplishment in the field of clinical or preclinical endocrinology. It was established in 1942 but no recipient was selected until 1944 when the Award was presented for the first time to Dr. E. B. Astwood; in 1945 it was won by Dr. Jane A. Russell; in 1946 it was presented to Dr. Martin M. Hoffman; in 1947 to Dr. Choh Hao Li; in 1948 to Dr. Carl Heller; and in 1949 to Dr. George Sayers. The Award is for \$1200 which is increased to \$1800 if the recipient within 24 months of the date of the Award chooses to use it toward further study in a laboratory other than that in which his work was done. Candidates for the Award are nominated by the members of the Association for the Study of Internal Secretions.

SOUTHEASTERN ALLERGY ASSOCIATION

The fifth annual meeting of the Southeastern Allergy Association will be held at the Columbia Hotel, Columbia, S. C., on Saturday and Sunday, Feb. 11 and 12, 1950. Please note that the month has been changed because of changes made in the meeting dates of the Academy of Allergy and the College

1. New York Times, August 17, 1949.

2. New York Times, August 16, 1949.

of Allergists. This puts the meeting about midway between the two.

Guest speakers will be Dr. Jonathan Forman, president of the American College of Allergists and Dr. Theodore Squire, president-elect of the American Academy of Allergy.

In view of the popularity of panel discussions, there will again be two: one on Pediatric Allergy with Dr. Lewis Hoppe of Atlanta as coordinator, and the other on Office Procedure with Dr. Warrick Thomas of Richmond as coordinator.

Members who are desirous of presenting papers at this meeting are urged to contact the secretary at an early date. Each paper will be allowed 20 minutes for presentation and 10 minutes for discussion.

There will be an informal luncheon on Saturday noon. The banquet will be held Saturday night, followed by a dance. Both will be at the Columbia Hotel.

Make your hotel reservations directly with the Columbia Hotel, Columbia, S. C. Do it now, before you forget.

The Columbia Medical Society holds its regular meeting at the Columbia Hotel on Monday night, Feb. 13, 1950. You are cordially invited to stay over for cocktails and dinner at 7 P. M., followed by the scientific meeting. Dr. Harry Rogers of Philadelphia is to be the guest speaker.

NATIONAL TUBERCULOSIS ASSOCIATION

The 46th Annual Meeting of the National Tuberculosis Association will be held April 24-28, 1950, at the Hotel Statler, Washington, D. C. The National Tuberculosis Association is a non-official organization which since 1904 has been waging war against tuberculosis in the United States. Today it has 3,000 affiliated state and local associations engaged in a nationwide fight against the disease.

Meeting concurrently with the NTA will be its Medical Section, the American Trudeau Society, and the National Conference of Tuberculosis Secretaries, an organization of public health workers.

Dr. David A. Cooper of Philadelphia, Pa., general chairman of the Annual Meeting Program Committee, has announced that the medical sessions will be devoted to the following four major fields — the chemotherapy of tuberculosis, surgical aspects of

tuberculosis, laboratory investigations, and nontuberculous diseases of the chest.

Tentative plans for the public health sessions, according to Dr. Cooper, are for discussion of the non-hospitalized patient, evaluation of community-wide programs, elements in a community health program, and new developments in community health organization.

Both scientific and public health exhibits will be displayed throughout the meeting.

Further information may be obtained by writing the National Tuberculosis Association, 1790 Broadway, New York 19, N. Y., U. S. A.

MILLER TO HEAD U. S. P.

At a special meeting of the U. S. P. Board of Trustees held on September 17, 1949, Dr. Lloyd C. Miller was unanimously elected as Director of Pharmacopoeial Revision for the new decade which will follow the meeting of the U. S. P. Convention in Washington in May 1950. He will succeed the retiring chairman, Dr. E. Fullerton Cook, who has been associated with the U. S. P. since 1901, and has served as chairman since 1920.

Dr. Miller comes to this important position with well-rounded training in many of the fields which are so vital to the pharmacopoeial program of today. He has been a member of the U. S. P. Revision Committee since 1944 and became chairman of the Subcommittee on Biologic Assays in 1946. He was also in close contact with the revision of the U. S. P. XI and of XII during his career in the Food and Drug Administration.

Dr. Miller was born in Streator, Illinois, on July 2, 1907. He received a B. A. degree with honors in chemistry from Pomona College in California in 1929 and his Ph. D. from the University of Rochester School of Medicine and Dentistry in 1933 with his major in biochemistry.

From 1929 to 33 Dr. Miller was Teaching Assistant in Pharmacology, University of Rochester School of Medicine and Dentistry; 1933 to 35, Research Fellow at the Upjohn Company, serving in biochemistry, primarily in the steroid sex hormone field; 1935 to 43, with the Division of Pharmacology, U. S. Food and Drug Administration, Washington, D. C., starting as an Assistant Pharmacologist and advancing to Senior Pharmacologist in 1940, his work being both regulatory and

investigative in nature; 1943 and 44, Senior Pharmacologist with the Winthrop Chemical Company; 1944 to the present, Director, Biology Division, Sterling-Winthrop Research Institute, Rensselaer, New York, now directing the activities of a staff of about 65 biologists who represent several specialties including bacteriology, virology, biochemistry, pharmacology, and pathology. Dr. Miller has been one of the most active members on the U. S. P. Revision Committee, handling his own subcommittee and related problems in a thorough manner, and also taking an active interest in the several other U. S. P. subcommittees and advisory boards on which he serves. His contact with U. S. P. activities embraces the U. S. P. XI, XII, XIII, and XIV.

Dr. Miller is a member of the American Society for Pharmacology and Experimental Therapeutics, the Biometrics Society, the American Pharmaceutical Association, Sigma Xi, the Medicinal Chemistry Division of the American Chemical Society, the American Association for the Advancement of Science, and the New York Academy of Sciences.

The Ebert Prize of the American Pharmaceutical Association was awarded Dr. Miller in 1940 for research on the assay of digitalis which was carried out with his associates in the Food and Drug Administration. This research pioneered the application of statistical methods of analysis in biological assays in this country.

He is the author or co-author of more than 25 published scientific papers, covering various phases of pharmaceutical research. These may be found in publications such as the following:

- Journal of Biological Chemistry.
- Journal of Pharmacology & Experimental Therapeutics.
- Proceedings, Society Biological Chemists.
- Proceedings, Society for Experimental Biology & Medicine.
- Journal American Pharmaceutical Association.
- Journal Association of Official Agricultural Chemists.
- Science.
- American Journal of Obstetrics and Gynecology.
- Annual Review of Physiology.
- Federation Proceedings.
- Annals, New York Academy of Science.

Dr. Miller has recently been appointed Associate Editor of the Journal of Pharmacology and Experimental Therapeutics.

The responsibility of appointing a Director of Pharmacopoeial Revision is placed in the hands of the Board of Trustees by the By-Laws of the U. S. P. Convention. The Board has been fully aware of this important obligation ever since the By-Laws were changed in 1942, and has given it considerable thought and serious attention for the past several months. The advice and suggestions of the U. S. P. Convention Nominating Committee were requested and these were subsequently given due consideration in arriving at the final decision. Numerous names were presented for consideration and extensive sketches were prepared for each individual whose name had thus been submitted, the Board reaching its final decision only by a gradual process of elimination.

Epileptic Variants—The first step toward correct diagnosis is to be aware of the fact that the patient's complaints may be due to epilepsy, with its numerous variants. Most of these patients show a paucity of signs on examination. Meticulous history taking, though long and perhaps tedious, is essential. Particular attention must be paid to the chronologic sequence of events. Electroencephalography may or may not be of assistance; it often beautifully substantiates the clinical impression, but a normal electroencephalogram will not rule out epilepsy.

Four characteristics common to most epileptic seizures will greatly assist with the diagnosis: First, the attacks are episodic in nature; second, the beginning and termination of each episode are well defined; third, each seizure tends to follow the same pattern; fourth, the attacks are usually unmotivated and unrelated to environmental factors. It is not unusual for the variants to be succeeded sooner or later by generalized fits. The true epileptic nature, of many strange behavior reactions, is frequently unsuspected until these more readily recognized manifestations occur.

When the diagnosis of epilepsy has been made, the causation of the fits must be established, so far as possible, before appropriate treatment can be started. Seizures are caused by any change in the body which enhances the irritability of the nerve cells. This may be mechanical, such as brain trauma, tumor or hemorrhage; metabolic, such as low blood sugar; toxic, as from lead, arsenic, metrazol or strychnine; or from some inherent and still obscure disorder of the neurones which is called idiopathic (cryptogenic) epilepsy. Careful clinical and neurologic study is essential before we are justified in labelling the seizures as "idiopathic." Any of the epileptic variants may result from such serious conditions as a brain neoplasm or a degenerative disease of the nervous system.—*Graves, J. M. A. Georgia, Oct. '49.*

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

ANOTHER STEP FORWARD

W. A. Dörler, Jr.
Director of Public Relations

On Sunday, October 9, about fifty physicians sat down together at the First Public Relations Conference of the Medical Association of the State of Alabama. This group was made up of Public Relations Committee Chairmen from County Societies, County Society Presidents, members of the Board of Censors of the State Association, and the Committee on Medical Service and Public Relations.

The purposes of this conference were stated as follows: "... better to integrate the work of State and County Public Relations Committees and to formulate more definite and comprehensive plans for the coming year." From 10:30 a. m. until 5:00 p. m. these men discussed the problems facing the profession and the public and laid plans for meeting some of the most urgent phases of these problems. The greatest emphasis of the whole conference was placed on constructive measures. At all times an effort was made to determine how situations could best be handled so that we are not in a position of being just "aginers." Perhaps no world-shaking ideas emerged, but very definite feelings were expressed. And it is certainly felt that from these ideas better solutions may be worked out, solutions that may be a step forward.

This group of men did not dodge the difficult issues as may be seen by looking at the subject matter. In the field of medical public relations in Alabama there was an open and frank discussion on the political situation both in Washington and our state. This was not a rehashing of old ideas but a frank look at where we are and where we need to go. Under problems as seen by the public the two most critical aspects were discussed, namely costs and night and emergency calls. Then an effort was made to see why many members of the profession are willing to "let John do it," and penetrating questions were asked concerning means of alleviating this situation.

Perhaps one of the best discussions of the day dealt with our own voluntary insurance plan. Some members of the Board of the Hospital Service Corporation had an opportunity of hearing constructive criticisms about the service and in turn were given the opportunity of answering these statements. Under consideration were such ideas as better coverage for the rural population, extension of service to home calls, and means of getting more physicians to work with and for the plan. Naturally all aspects of these problems could not be answered and complete plans could not be evolved, but with these urgent problems on the table a better solution may be expected to result.

Perhaps the most important outcome of all the discussion was the resolution requesting the Committee on Medical Service and Public Relations to formulate a statement stipulating what the medical profession in Alabama stands for in the field of medical care and public health. Naturally this statement must be submitted to the Board of Censors and to the County Medical Societies for approval. This, however, seems to be a great step forward in that now we may have a definite and concise idea of what we stand for and not just what we hope to prevent. This is a tremendous undertaking for the Committee, but it will be more than worth while. Yes, when we can agree that such a statement is needed and can set up the machinery for formulating this statement, we have indeed made a great step forward.

Anticoagulants—Our experience with the use of anticoagulants in a large number of cases confirms the experience of others in that heparin and dicumarol are effective in the prevention of vascular thrombosis and in the prevention and treatment of arterial and pulmonary embolism. In congestive heart failure the use of dicumarol prevented thrombo-embolic complications except in 2 possible cases, and effected a reduction in mortality which is probably significant and which can be attributed entirely to the prevention of thrombo-embolic complications.—Anderson, *New Orleans M. & S. J.*, Oct. '49.

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

ATTENTION, DOCTORS!

We want to thank you sincerely for granting us the two favors we asked of you last month. We appreciate your interest in the work we are trying to do, and want more than anything else to warrant the great confidence you have placed in us.

For those of you who did not read last month's Journal, may we again state how we want you to help us. First, may we ask that you please take your Journal home for your wife to read when you have finished with it? Second, if your wife is not a member of our organization, won't you talk to her about joining. We feel that in our program there is a definite place for every doctor's wife. Probably, never before in the history of medicine has there been a greater need for full cooperation between doctors' and their wives to work together against the threatening cloud of government-controlled medicine.

If you are a member of the Medical Association to the State of Alabama, your wife is eligible for membership in the Auxiliary. If there is no Auxiliary to the County Medical Society where you are located, she may become a member-at-large, paying national and state dues of \$1.00 each or \$2.00 for the two. Your interest and persuasion that your wife join the Auxiliary will certainly convince her that she should become one of us. May we again assure you that the Auxiliary is working very closely with the County Medical Societies throughout the state, and is trying to do just what they want it to do.

For further information, ask your wife to write our State Organization Chairman, Mrs. J. G. Daves, Cullman, or Mrs. Wm. J. Rosser, President, 2721 Hanover Circle, Birmingham.

DEAR MRS. DOCTOR'S WIFE:

Are you a member of the Woman's Auxiliary to the Medical Association to the State of Alabama? If not, may I point out the great need for your becoming one of us?

Now is the most opportune time to increase our membership, for the greater our

number the more power there is in our influence. Physicians' wives are the leaders in every community and, today, as probably never before in the history of medicine, has there been a greater need for their guidance when the medical freedom of our country is threatened.

Where physicians' families are scattered and an Auxiliary is not feasible, you may become a member-at-large of the state organization, paying dues of \$1.00 each to state and national. There is a great need for the work you can do in your vicinity, and your connection with us will help you to know just what and how you can do this work.

Don't put off joining with us. We need you, and the medical profession needs your cooperation.

ANOTHER COUNTY AUXILIARY

It is with a great deal of joy we welcome into the Woman's Auxiliary another county unit. We are proud to have Marshall County as one of us to help carry on our great work. Marshall was organized on September 14 in Boaz with nine charter members. We are happy to introduce the following officers of this new Auxiliary: Mrs. H. L. Rogers, Albertville, President; Mrs. B. N. Lavender, Albertville, Vice-President; Mrs. M. B. Bray, Albertville, Secretary; and Mrs. M. T. Hunt, Boaz, Treasurer.

We want the members in Marshall County to know that every officer and committee chairman in the state organization and every county Auxiliary is always ready to help you in any way that you might need us.

ATTEND NATIONAL

Mrs. William J. Rosser, State President, and Mrs. J. G. Daves, President-Elect and Organization Chairman, attended the National Auxiliary Board Meeting in Chicago on November 3 and 4. In next month's Journal information regarding the meeting will be given Auxiliary members.

BULLETIN OF THE AUXILIARY

Since only 70 of the 668 members in the state Auxiliary in 1948-49 subscribed to the Bulletin of the Woman's Auxiliary to the American Medical Association, we are giving you below the 1949 Convention Address made to the Auxiliary by Dr. Ernest E. Irons, President of the American Medical Association. We do not feel that seventy is a large enough number of women in our state to have the privilege of reading Dr. Irons' address.

"A great deal has been said in the past two or three days about the seriousness of the present situation, and nobody feels more serious about it than I. There are two things that I feel we should bear in mind. First, the doctor's wife has much power but she is at a disadvantage because when she talks about socialized medicine her friends outside the medical profession say she is taking care of her own pocketbook. A good technic is to get three or four of your lay friends to be on your side and talk against socialized medicine. They will do it better than you; only don't assume they are going to do it. See that they do it. This is a fight and is going to be a hotter one before we get through. Even if we win this year, and we shall, we still have to deal with socialization. By next year there will have been drawn into this fight not only the doctors but business and other professions. And I would like to predict that within a year or two labor unions will recognize the threat to them of socialization of medicine and of industry.

"I was looking over some notes on the letters of comments, criticisms and suggestions that have come in from some of the Auxiliaries to the steering committee. Some of them were excellent suggestions. Others complained that by the first of March no one had gotten steamed up. Now they are beginning to get so much mail they cannot keep pace with it. You cannot suit everybody, but the facts are that this postponement of action in Congress is perhaps warranted by certain other priorities they have had to observe, and it also is evidence of a certain weakening.

"I don't feel as comfortable as I would like to have you think. This is a fight that has to go on and on and it has got to be carried to the man on the street, the man on the farm—everybody. The average person does not understand what it is all about; that is the problem. Not the educating of the man at top. The ones you have to educate are the ones who do the voting.

"Another criticism that we have received is that there are too many emergencies. We do not like to be worried about so many critical situations. The whole situation was critical and it is now. What we must do is continue to lay the groundwork of this educational program actively so that by spring we will have a different situation from last spring. We are getting lots of mail and it is a trial to read it all, but it is important; so when you get mail from the A. M. A. or

Whitaker and Baxter, or other sources along the same line, please read it."

If you are not a subscriber to the Bulletin, you are probably the one who can't see what the Auxiliary can do to help the State Medical Association. You are missing very fine reading material, and you are not posted as to what our Association is doing throughout the country. It is utterly impossible to have discussed at your regular meetings everything you should know as an Auxiliary member. Subscribe to the Bulletin. It will only cost you \$1.00 a year, and will be a dollar well spent. To be a good Auxiliary member there are some very important tools you should have, and the Bulletin is one of the most important. Without it you are like a doctor without his stethoscope, or a carpenter without a hammer.

HYGEIA CONTEST

The Hygeia contest is on. Is each of you working for more subscriptions to put your county and state out front in this contest? Could your Auxiliary use for some wonderful purpose the prize money you might win if you work hard enough? Do you read Hygeia, The Health Magazine? If you are not a subscriber, how can you expect others to be? If you do not have an interest in this official publication of the American Medical Association, how can you consider yourself well posted on things you should know? Even a doctor's wife can learn much from Hygeia, and yes, your husband doctor should know the information the American Medical Association is giving the public. How wonderful you could feel knowing you had helped a family or friend not so fortunate to be a family or a wife of a doctor in their need for health guidance that Hygeia can give.

In 1948-49, of the twelve county Auxiliaries in the state with a membership of 668, we only had 245 Hygeia credits. This does not look good for a state as fine as Alabama, when compared with Pennsylvania with 3334 Hygeia credits. Are we a backward Southern State? I'll say we are not, so let's show the national organization that we are behind the American Medical Association one hundred per cent. Remember, the A. M. A. has asked us to promote Hygeia, and if you, as an Auxiliary member, will be a subscriber, you will want to see more subscriptions going into more homes.

Our National Hygeia Chairman, Mrs. Herbert W. Johnson, in her 1949 Convention Report made a plea that we not wait until about one month before the contest closes, when the holidays are taking up everyone's thoughts and interest, for then even chairmen and members are too busy to give the time and effort it takes to make a success of any undertaking.

Concentrate your efforts on getting Hygeia subscriptions in as many homes as possible, and start on this today.

BLUE CROSS-BLUE SHIELD

When Auxiliary members are discussing things they should know as wives of doctors, whose profession may cease to enjoy the freedom which has allowed it to attain such heights in perfection, they should not fail to know all about Blue Cross-Blue Shield Medical and Hospital Care.

The time has come when the American public is demanding more and more in health benefits, and though most of them would rebel furiously to government-controlled health, if they understood the destroying effect it would have on the health of the entire nation, they still want protection; and if the American way of living is going to exist in the way it has in the past, they are going to have this protection to which they are and feel they are entitled. Without understanding too well the ultimate outcome, they are going to follow the one who promises the most. The Auxiliary and the medical profession know the compulsory health insurance plan is all wrong, but we must have something better to offer, along with a convincing story as to why it is better. The Blue Cross-Blue Shield is one of the answers, so you must know about it from beginning to end. Do this at once. You never know when you will be called upon for a solution to the problem confronting us.

If you do not have information available, contact the Home Office of the Hospital Service Corporation of Alabama, 2119 First Avenue North, Birmingham or the Montgomery Branch, 701 First National Bank Building, or the Mobile Branch, 802 First National Bank Building. They will be more than pleased with your interest, and will give you every cooperation.

LEGISLATION

Mrs. Mack J. Roberts, State Legislative Chairman, has asked that all county chairmen cooperate to the fullest with plans for the year. Her suggestions regarding the things we can do in opposition to the National Compulsory Health Insurance Plan are as follows:

1. Letters from (representative) voters to the two Senators and their Representative, stating that they are opposed to compulsion. (Each person writing 3 letters, one to each of the above.)

2. Cards or letters from as many voters as possible to the above three legislators against the plan. As a sample letter or card they might say: "Dear Sir: I do not believe that National Compulsory Health Insurance serves the best interest of the country from a health and economic standpoint. I therefore urge your vote and support against any such measure." Mrs. Roberts suggests that each auxiliary member be responsible for at least 50 sets of these. When these cards are signed, the Legislative Chairman could mail them at the rate of 10 sets (30 cards) a day.

3. Resolutions by groups (Lions, Rotary, Chamber of Commerce, P. T.-A. etc.) against the National Health Insurance Bill, these resolutions also to be in 3 copies as above outlined.

4. An intensive educational program:

- (a) See that material is in your public library and in the school libraries.

- (b) Posters (furnished by A. M. A.) in prominent windows.

- (c) Essay contests in high schools; example, best essay against National Compulsory Health Insurance; your Auxiliary to offer some prize for best essay.

- (d) Use newspaper and radio.

* * *

In a recent report made by our National Legislative Chairman, Mrs. Bruce Schaefer, it will be noted that a well planned program is essential if our efforts are to succeed. "The Woman's Auxiliary to the American Medical Association can be a strong force in helping to promote wise and adequate health legislation. It can be equally effective in defeating legislation that is detrimental to the public health. But it can accomplish this only if its legislative committees are well organized and actively

operating on a county, state and national basis. As in all programs, the first organizational step should be a definition of objectives. In the case of an Auxiliary legislative committee this means consultation with the officers and legislative chairman of the local medical society to determine the society's position on pending legislation. The medical society legislative committee constantly studies health-related bills and can furnish the Auxiliary committee with a great deal of valuable information."

Mrs. Schaefer further states that "A joint meeting of the legislative committees of both organizations would provide valuable indoctrination. The Auxiliary committee could learn much about legislative tactics, current legislation that interests the medical society, and what the society is doing about it. The doctors, in turn, could be informed of the ways in which the Auxiliary could work with them. A third benefit would be the personal contacts formed, which are always invaluable in creating teamwork."

After this indoctrination meeting, the Auxiliary committee can proceed to outline a program of legislative activities which dovetails with the medical society program. It will fall roughly into two classifications:

1. The National Education Campaign: a. Defeating compulsory health insurance; b. Promoting voluntary health insurance.
2. General Legislation on Health and Related Matters: a. Antivivisection; b. Basic science laws; c. Public health measures; d. Hospital construction bills; e. Measures relating to medical education; f. Local medical legislation.

Once the legislative objectives are outlined, the function of the legislative committee will be:

1. Educate the entire membership of the Auxiliary as to the pros and cons of pending bills and/or the necessity for legislation to correct given health problems. This educational process should include the obtaining or preparing of literature to pass out to the Auxiliary members. It could be in the form of a periodic bulletin which would keep them up to date on legislation.
2. Activate all Auxiliary members to promote or oppose health legislation vigorously as the occasion demands. This program will include: a. Letter writing to Congressmen,

Senators, and state legislators. b. Influencing other women's organizations to pass resolutions for or against legislation, to write letter to legislators, and in other ways to work cooperatively with the Woman's Auxiliary in supporting measures for health improvement. c. Distribution of informative materials on particular health legislation to the public. d. Assistance to the medical society's legislative committee in any other way they may request.

"Legislators on all levels of government are coming to realize that the phrase 'Never underestimate the power of a woman' has teeth in it. We can and must use this woman's power to the utmost in this critical year for American Medicine."

ALABAMA HEART ASSOCIATION, INC.

The Alabama Heart Association is an incorporated state association of both lay and medical men and women for the advancement of knowledge in the cardiovascular field and the control of heart and related diseases. It is a chartered affiliate of the American Heart Association.

The Alabama Heart Association supports a triple program throughout the state composed of: Research and study of the 3 chief causes of heart disease—rheumatic fever, high blood pressure, and arteriosclerosis, or hardening of the arteries; Community service in the form of case finding and the promotion of clinical services; and Education for both layman and doctor through an organized heart disease control program for an early attack and prevention of heart disease.

The Alabama Heart Association has active chapters already in existence in Anniston, Birmingham, Decatur, Dothan, Florence, Gadsden, Huntsville, Jasper, Mobile, Montgomery, Selma, Talladega and Tuscaloosa. The Association is constantly at work to establish new chapters in other cities and counties throughout Alabama.

You can help the Association by your financial support of its work; by learning about the work of the Association, by helping to inform the public about heart disease and its control, and by stimulating and supporting a Heart Association chapter in your own community, by contributing to the Association and its chapters your *active services*, in the form of both time and energy,

both before and during the annual Heart Fund Drive each February. The Association needs your help in the distribution of plastic hearts and posters, in solicitation, and in the accomplishment of the vast amount of routine work that is a part of any campaign.

The Alabama Heart Association solicits your interest and your active assistance in promoting knowledge and control of heart disease in Alabama, the most destructive disease in our state and our Nation!

The work of organizations as the Heart Association should be of utmost importance to Auxiliary members. Volunteer your services; don't wait to be called on. This is one of the fields in which you have pledged yourself to serve.

Heart disease has been increasing steadily. Today it is the leading cause of death in the United States. One out of every three deaths is due to diseases of the heart and blood vessels. It is estimated that one out of every twenty persons suffers from some form of heart or blood vessel disease. There are few people who have not lost friends or relatives as a result of the heart diseases. The obituary page of the daily press further emphasizes the seriousness and extent of heart disease.

Heart disease takes a greater toll than the next five leading causes of death combined. In 1946, the last year for which complete figures are available, more than 588,000 persons died of diseases of the heart and blood vessels. During the same year, fatality figures for the next five highest causes of death were cancer 182,000; accidents, 98,000; nephritis 82,000; pneumonia, 62,000; tuberculosis, 51,000.

Mortality from diseases of the heart and blood vessels is three times as high as cancer, six times as high as accidents, nine times as high as pneumonia, and eleven times as high as tuberculosis.

Heart disease is no respecter of age. There are congenital malformations of the heart which are evidenced at birth but these are comparatively few. Rheumatic fever and the resulting rheumatic heart disease together constitute the leading fatal disease among young people between the ages of 5 and 19. Over the age of 35, diseases of the heart and blood vessels lead all causes of death, taking the greatest number of lives

between the ages of 40 and 60. Nearly one out of every two deaths after the age of 45 is caused by heart disease.

Heart disease takes a heavy toll in sickness and disability as well as death. It strikes down thousands of men and women in the prime of life, when they are beginning to make their richest contribution to society. The economic cost of heart disease is staggering in terms of loss of life, absenteeism, disability, loss of gainful employment, and care and treatment programs. An estimated 152,100,000 work days, or billions of dollars in productivity, are lost each year because of heart and blood vessel disorders. Heart disease is a leading occupational disease of business executives. It drains business of brain power, training and leadership.

MONTGOMERY COUNTY UNIT

Montgomery County Auxiliary had its first meeting of the fall on October 21, 1949. Mrs. Wm. J. Rosser, State President, was honored guest of this meeting, and was very enthusiastic as to the work being done by the Auxiliary. She urged that every doctor's wife be prepared to do and to do well the work that is before us. She stressed that we know the answers to any questions that might be put to us regarding the health laws of our great country. She urged that we study and stand united in helping others know the truth about the alarming question of the Government's control of medicine confronting us.

Mr. W. A. Dozier, Director of Public Relations, attended the meeting and discussed the program of legislation to be studied. He gave the Auxiliary members something of a definite program to work out. The groundwork for this program is being laid, and Mrs. Henry C. Collins, Legislative Chairman, together with Mrs. C. A. Willis and Mrs. J. L. Branch serving on her Committee, is working very closely with Mr. Dozier in this public relations work related to legislation.

The Year Book was presented at the meeting, and the following new officers and committee chairmen reported: Mrs. H. L. Rosen, President, Mrs. G. S. Peters, Vice-President, Mrs. Wm. L. Smith, Secretary, Mrs. W. A. Gunter, Treasurer, Mrs. J. A. Jones, Auditor, and Mrs. J. S. Hough, Historian. Mrs. M. J. Abrams, Program, Mrs. F. D. Reynolds,

Hygeia, Mrs. Henry C. Collins, Legislation, Mrs. S. D. Suggs, Public Relations, Mrs. W. T. Brannon, Scholarship, Mrs. A. E. Thomas, Membership, Mrs. T. S. Boozer, Press and Publicity, Mrs. J. A. Jones, Cancer, Mrs. J. Sam Smith, Heart, Mrs. B. W. Cobbs, Tuberculosis, Mrs. T. C. Marrs, Crippled Children, and Mrs. David Monsky, Telephone.

The program for the year is one of much interest. On November 18 Dr. T. C. Marrs of the Crippled Children's Hospital will be guest speaker, his topic being "Handicapped Children." On January 20 Mrs. Peter Vredenburgh, Democratic Committeewoman will be guest speaker. On February 27 Dr. Edgar G. Givhan, Jr., President-Elect of the Alabama Heart Association will bring information regarding the work of the Heart Association in Alabama. Mrs. Lillian G. Meade, State Commander and Executive Director of the Field Army of the American

Cancer Society, will appear before the Auxiliary on March 17. On April 21 Mrs. Thomas F. Parker of the University of Alabama, Tuscaloosa, will be guest speaker. On May 19 new officers to be elected in April will be installed.

PUBLICITY

Please let your Journal representatives know of the work as being done in your Auxiliary. What you, as a unit, are doing is of great interest to all of us, and could furnish excellent ideas for those of us who are struggling to make our programs worth while. The Journal furnishes us with an excellent means of keeping posted, so let's use it. Please send your news to Mrs. Fred Reynolds, 8 College St., Montgomery, Alabama, on or before the 10th of the month for publication the following month.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

DR. CALMETTE AND VACCINATION AGAINST TUBERCULOSIS

You have probably heard many times about the Alsatian lad who became Louis Pasteur's first human rabies patient. He had been bitten by a mad dog, you remember. His mother took him to the great scientist, begging him to do something to save the youngster from the horrible death that rabies brings. Pasteur had been using his newly developed antirabies treatment on animals, with considerable success. But he was reluctant to try it on humans. It is one thing to do something that might result in the death of an animal. It is quite something else again to risk administering a new product for the first time to a fellow-human being. Pasteur gave the matter long and grave consideration. Then he decided to find out if his treatment would work as well in preventing rabies in this strange, frightened lad as it had worked in animals. You know the outcome: The new treatment was administered. The child escaped rabies. And on that day was born one of mankind's

greatest medical boons. It is widely used in Alabama and throughout the civilized world. Millions of people know it as the Pasteur treatment. Thanks largely to it, a human case of rabies is a rarity. If it were universally used when needed, this frightful illness would virtually cease to exist.

A strikingly similar story is told by Professor Camille Guerin, co-discoverer of the B. C. G. vaccine for tuberculosis. Professor Guerin was chief of the Tuberculosis Service of the Pasteur Institute in Lille soon after World War I. The director of the Institute at that time was Albert Leon Charles Calmette, the other member of the famous Calmette-Guerin team that gave the world that great medical discovery.

The year was 1921. For years these two men had been working feverishly to develop a vaccine that would give people, children especially, at least a measure of immunity to tuberculosis. At last they had reached the point where they felt it was ready for a trial upon a person. But, like Pasteur several decades earlier, they hesitated. The frightful responsibility of administering a new product upon a fellow-human swept down upon them like a heavy cloud. They had developed a new breed, or race, of tu-

bercle bacilli. These bacilli differed from all others in the world in one important respect: They had been robbed of the power of causing anyone to have tuberculosis. That was evident from the laboratory tests. But was it true in literal practice? Did these seemingly harmless test-tube germs possibly have the power to produce a disease, or a number of diseases, vastly worse than tuberculosis? That remained to be seen. And the only way to find out was to do what these two men were so hesitant about doing—administering these tamed bacilli to someone.

Dr. Calmette and Professor Guerin waited and waited. Perhaps, they thought, they would have an opportunity to try out the new vaccine without subjecting themselves to the agony of anxiety and uncertainty. Meanwhile, they kept on with their work.

At last such an opportunity appeared. It seemed almost made to order. In a Paris hospital an obscure housewife was slowly dying of tuberculosis. There seemed to be a furious race between death and the new life that was just beginning inside her body. The latter won, and the woman achieved the miracle of motherhood before beginning the miracle of death. The only person left to care for the new baby was its grandmother. She herself (the grandmother) was a victim of tuberculosis. Under such circumstances, Professor Guerin commented laconically, there was "nothing to lose."

The hospital pediatrician went to see him and Dr. Calmette.

"What have we to risk?" he asked.

The others agreed that there was virtually nothing to risk. The infant son of a dying tuberculous mother, destined to be cared for by a tuberculous grandmother virtually had a tuberculosis death sentence imposed upon it at birth. At worst, the use of the new vaccine would hasten a death that appeared certain anyhow. At best, that death sentence might be cancelled. In either case, the new B. C. G. vaccine would have had its first test on a human being.

"Here we go," the hospital pediatrician said. A few minutes later, it was all over. The first child had received artificial immunization against the Great White Plague.

Although Professor Guerin is regarded as the co-discoverer of B. C. G. vaccine, major credit for its discovery has been accorded Dr. Calmette.

Alabama's General William C. Gorgas studied medicine in order to get into the United States Army. Similarly, Dr. Calmette studied medicine in preparation for a career in the French Navy. The medical school he chose was l'Ecole de Medicine de Brest. There he became greatly interested in the new science of bacteriology which had been opened up by the great Pasteur. From the Brest medical school he went on to the Faculte de Paris. There he received the French equivalent of the American M. D. In 1886, he went to the Congo as a colonial physician.

Dr. Calmette rose rapidly in his profession. In 1888 he was sent to Newfoundland, accompanied by his young bride. Using his knowledge of bacteriology, he discovered the bacteria responsible for wholesale spoilage of fish, involving tremendous financial loss to that country's fishing industry. More important, he also succeeded in preventing that spoilage and stopping that heavy loss. Returning to France, he began work in the Paris laboratory of Dr. Emile Roux, a friend of Pasteur's. The young physician did such outstanding work that his superior told his famous friend about him and arranged an interview between the two. It changed the course of Calmette's life. For Pasteur had a job for him: He asked the younger man to establish a Pasteur Institute in Saigon, in far-off Indo-China. The Institute he established is still in operation. Dr. Calmette gave it much of his attention. But other interests also claimed it. He set to work to unravel the involved mysteries of dysentery, Asiatic cholera and undulant fever, which were plaguing the people of Indo-China and other Asiatic countries. He also developed a process for making grain alcohol commercially. He produced an antivenin against cobra bite. This was a great boon to the people of that country and others where the bites of this deadly poisonous snake ranked among the leading causes of death.

After some years in the Far East, Dr. Calmette again returned to Paris. There he went to work on the development of an anti-pest serum aimed at the deadly bubonic plague. He also worked on experiments leading, he hoped, to the development of an antitoxin against diphtheria. His idea, later, was to use this antitoxin to treat the troublesome croup of infancy.

His work in Paris was interrupted in 1895, when he felt himself called to other tasks. It was a great thing for humanity that he answered that call.

Pasteur was dying. As he lay near the portals of the next life he asked Calmette to establish another Pasteur Institute. The people of Lille had raised the necessary funds, but there was no one in their community who was capable of serving as director. Calmette was the man they needed and wanted. As on other occasions, he went.

Soon after his arrival in Lille, he found himself facing an acute medical crisis. The miners of that coal-producing section were falling victims rapidly and in large numbers to tuberculosis. He set himself to fight this avalanche of disease and death in a new way. Turning the institute in his charge into a battleground in the war against the tubercle bacillus, he was able to restore many of its victims to health.

But that was not enough. Why, he asked himself, not do something to prevent people from having tuberculosis?

He answered that question by beginning a search for a suitable preventive. That search, we are told, became an obsession with him. It also gripped the imaginations of his fellow-workers, including the already-mentioned Professor Camille Guérin. After a number of "trial runs," they decided their best method of approach was to rob tubercle bacilli of their virulence and then inject them into the bodies of those willing to submit to this procedure. In accordance with the strict code of the experimenter, they were tried out first on animals: rabbits, guinea pigs, chimpanzees and calves received the injections. Then, moving a step further, they were administered to cattle. That was in 1914.

Nineteen fourteen, as you do not need to be reminded, was the year of the outbreak of World War I. Lille fell into the hands of the enemy. But Calmette, at work on a project that would aid all humanity, stayed there. The culture of what became known as B. C. G. went on under his supervision. The Germans, who had shown evidences of ruthlessness on other occasions, seemed to accept his dictum that the work he was doing was too important to be interfered with, even by an army of occupation.

But the work of trying to find a preventive of tuberculosis with the enemy at the door

was not without serious difficulties. The Germans, so punctilious about not interfering with the operation of the institute, were less considerate of the director as a husband. Mrs. Calmette was one of twenty prominent women of the city who were taken as hostages in reprisal for some act of the Allies which the Germans did not like. Potatoes, so necessary in experimental work, were scarce. Professor Guérin makes no bones about how he and his superior got them: They bought them in the black market. ("—it's not an invention of the last war," he said.) Beef spleen was also a "must" for the experiments. Professor Guérin got it in a more conventional manner: "I went to the local slaughterhouse and explained the situation to the German veterinarian," he explained. "After that, I could have what was needed, providing I went to the slaughterhouse myself to get it."

After the war, work on the tuberculosis vaccine went on more smoothly. In time it was decided that it was ready to be given to humans. It was then that Dr. Calmette and his friend went through that agony of anxiety which has already been mentioned. With that hurdle successfully cleared, they began giving the vaccine to others. Within two years it had been administered to some 300 new-born babies.

B. C. G. vaccine is now widely used in Europe and other countries. Several studies are under way in this country to determine how it fits into the broad tuberculosis control picture. It would be unduly optimistic to say that it will immediately revolutionize the campaign to curb that disease. It will have no effect of course upon the treatment of those who already have it. As a preventive, it needs to be administered at a very young age; in infancy, in fact. So whatever benefits it provides will be enjoyed in the main by those still to be born. The future holds the key to the riddle of how greatly they will be aided.

Programs for the control of tuberculosis among college students are now being conducted at several hundred institutions. The incidence of tuberculous infection among entering students has shown a very significant decrease during the past fifteen years. In most sections of the United States less than 30 per cent of undergraduate students react to tuberculin and in many areas, less than 20 per cent.—*H. D. Lees, M. D., Diseases of the Chest, May 1949.*

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

SEPTEMBER 1949

Examinations for diphtheria bacilli and Vincent's	504
Agglutination tests (typhoid, Brill's and undulant fever)	1,329
Typhoid cultures (blood, feces and urine)	496
Examinations for malaria	3,236
Examinations for intestinal parasites	3,631
Serologic tests for syphilis (blood and spinal fluid)	27,251
Darkfield examinations	7
Examinations for gonococci	2,282
Examinations for tubercle bacilli	3,048
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	77
Water examinations	1,407
Milk and dairy products examinations	4,637
Miscellaneous	312
Total	48,217

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	Aug.	Sept.	E. E.* Sept.
Typhoid	21	6	20
Typhus	9	7	43
Malaria	22	18	515
Smallpox	0	0	0
Measles	66	15	34
Scarlet fever	19	39	75
Whooping cough	29	27	52
Diphtheria	16	42	60
Influenza	12	30	65
Mumps	30	17	23
Poliomyelitis	35	50	17
Encephalitis	0	0	1
Chickenpox	7	2	4
Tetanus	7	8	6
Tuberculosis	255	232	291
Pellagra	0	2	4
Meningitis	6	3	4
Pneumonia	69	75	105
Syphilis	1040	550	1395
Chancroid	5	15	18
Gonorrhea	496	483	611
Tularemia	0	1	0
Undulant fever	9	8	8
Amebic dysentery	2	1	2
Cancer	412	359	229
Rabies—Human cases	0	0	0
Positive animal heads	20	27	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

That older persons now constitute the major focus of tuberculous infection is emphasized by recent autopsy studies which show that a relatively large number of persons supposedly succumbing to diseases other than tuberculosis were found to have this disease in active form. It is recognized that the disease in older persons is frequently mild and that the symptoms may be overlooked.—*Statistical Bull., Metropolitan Insurance Co., Nov. 1948.*

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR JULY 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During July 1949			July Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	7481	**	**	28.7	26.4	29.3
Total stillbirths	204	**	**	26.5	29.4	30.0
Deaths (stillbirths excluded)	2205	1258	947	8.5	8.3	7.5
Infant deaths:						
under one year	274	136	138	36.6	35.5	29.7
under one month	190	99	91	25.4	26.3	23.2
Cause of Death						
Tuberculosis, 001-019	87	25	62	33.4	35.7	28.7
Syphilis, 020-029	18	8	10	6.9	10.0	6.2
Typhoid and paratyphoid, 040, 041					0.4	0.8
Dysentery, 045-048	3	2	1	1.2	***	***
Scarlet fever, 050						0.4
Diphtheria, 055	1	1		0.4	0.4	
Whooping cough, 056	1	1		0.4	0.4	3.9
Meningococcal infections, 057	1	1		0.4	0.4	1.2
Poliomyelitis, 080, 081	3	3		1.2	1.5	
Encephalitis, 082, 083					0.4	0.4
Measles, 085					0.4	
Typhus fever, 100-108					0.4	1.2
Malaria, 110-117	1		1	0.4	1.2	1.2
Malignant neoplasms, 140-200, 202, 203†	231	149	82	88.7	84.1	74.1
Diabetes mellitus, 260	21	11	10	8.1	13.4	8.5
Pellagra, 281	3	3		1.2	1.5	1.6
Vascular lesions of central nervous system, 330, 334	222	120	102	85.2	88.7	80.3
Other diseases of nervous system, 300-318, 340-398	41	27	14	15.7	10.0	***
Rheumatic fever, 400-402	3	1	2	1.2	0.8	***
Diseases of the heart, 410, 443	635	409	226	243.7	203.8	167.3
Diseases of the arteries, 450-456	32	16	16	12.3	9.2	9.3
Other diseases of the circulatory system, 444-447, 460-468	31	18	13	11.9	2.7	***
Influenza, 480-483	6	4	2	2.3	3.4	2.3
Pneumonia, 490-493	56	31	25	21.5	23.4	21.3
Bronchitis, 500-502	3	1	2	1.2	2.3	1.6
Appendicitis, 550-553	7	6	1	2.7	3.4	3.9
Intestinal obstruction and hernia, 560, 561, 570	20	11	9	7.7	9.2	4.3
Gastro-enteritis and colitis (under 2)	41	16	25	15.7	5.0	3.9
571.0, 764	11	7	4	4.2	4.2	4.7
Cirrhosis of liver, 581						
Diseases of pregnancy and childbirth, 640-689	19	10	9	24.7	28.2	26.0
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	4	1	3	5.2	4.2	2.6
Congenital malformations, 750-759	28	20	8	3.7	3.0	***
Accidental deaths, total, 800-962	154	103	51	59.1	67.9	51.2
Motor vehicle accidents, 810-835, 960	59	40	19	22.6	20.0	19.8
All other defined causes	434	224	210	166.6	181.9	203.7
Ill-defined and unknown causes, 780-793, 795	92	30	62	35.3	46.4	56.7

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the July report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204), and mycosis fungoides (205).

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

COOPERATIVE STATE FARM POND PROGRAM

Contributed by

Claude P. Owens, B. S.

Prin. San. and Pub. Health Eng.

The construction of farm ponds for fish raising, for livestock, and for recreational purposes has increased during recent years. The continuous increase in pond construction prompted the State Health Officer and the Director of the Department of Conservation to confer and agree on policies and practices relative to their interest in the preparation and maintenance of artificial lakes or ponds. The Director of the Department of Conservation agreed that no person in the future will obtain fish from his department for stocking a pond until he has been granted an "Authority to Impound" by the State Department of Health.

The procedure agreed upon for obtaining an "Authority to Impound" from the Health Department and obtaining fish from the Conservation Department for stocking purposes is as follows:

1. A request for an application blank and explanatory materials may be made by writing, as is the present practice, directly to the State Health Department or by contacting the County Health Department.
2. After the above materials are received the application blank is completed and sent to the State Health Department.
3. Upon receipt of this application, a "Preliminary Permit" giving authority to construct a dam and prepare the area to be flooded will be either issued or withheld dependent upon the recommendation of the County Health Officer.
4. After completion of work on the pond, an inspection is to be made by both the County Sanitation Officer and the County Game Warden. This inspection determines whether or not the pond is ready to impound from fish culture and malaria control viewpoints. However, this inspection may be made separately when a joint inspection is impractical.
5. Upon receipt of a favorable report of inspection from the County Health Department, "Authority to Impound" will be granted. Only after this "Authority to Impound" is granted can the owner legally

close the bottom drain and permit the pond to fill.

6. Along with the "Authority to Impound" the owner will be sent a postal card addressed to the State Conservation Department advising them that the "Authority to Impound" has been granted and that he is desirous of receiving fish for stocking purposes.

Consideration should be given to the inauguration of the joint inspection program immediately in your county on new pond construction, and as far as practical on ponds that have already been constructed. In counties where Sanitation Officer personnel is not available, the local Game Warden will make only the necessary inspections required by the Department of Conservation. He will advise the pond owners of the "Regulations Governing the Impounding of Waters," and that they should make application to the State Department of Health for a permit to impound.

The successful control of the production of the malaria transmitting mosquito, *Anopheles quadrimaculatus*, depends to a great extent upon the proper preparation and maintenance of the areas to be flooded. Likewise the successful production of fish depends, among other things, upon the proper preparation and maintenance of the ponded area. Almost all of the recommendations made by fish culturists for the production of fish are practically the same as those required by the "Regulations Governing the Impounding of Waters" adopted by the State Board of Health for malaria control purposes in 1927.

This agreement should be given publicity through the local newspapers. Through such a publicity program, the people of the county will have some idea as to the type of work the two Departments are doing and what is required of them relative to pond construction and maintenance.

Copies of the agreement were sent to County Health Department personnel and State Department of Conservation field personnel on February 9, 1949.

ANNUAL SESSION
BIRMINGHAM
APRIL 20-22, 1950

AMERICAN MEDICAL ASSOCIATION NEWS

DOCTOR CITES LIMITATIONS OF TUBERCULOSIS VACCINE

BCG vaccination against tuberculosis as now advocated appears to be a rather puny weapon against the disease, says a Veterans Administration doctor.

Protection with the harmless, man-made BCG vaccine cannot be expected to succeed where natural vaccination with living, virulent human tuberculosis germs already has failed, Dr. E. M. Medlar of Sunmount, N. Y., points out in the October 29 Journal of the American Medical Association.

BCG vaccine is a preparation for prophylactic inoculation against tuberculosis. It consists of living bovine tubercle bacilli that have been grown over a period of many years so that their virulence is greatly reduced.

Great numbers of people receive a "natural vaccination" by contracting a slight infection from other human beings, Dr. Medlar explains.

"In adults over 40 years of age, both minimal pulmonary tuberculosis and deaths from tuberculosis are caused in large part by reinfection after a previous infection has healed.

"It is extremely doubtful that artificial vaccination can produce results superior to natural vaccination, and yet natural vaccination fails to control the disease.

"It is suggested that greater emphasis be given to the major problem in tuberculosis—unrecognized tuberculosis and that due to reinfection in adults over 40 years of age. An effective solution to this problem would make the use of prophylactic measures in youth unnecessary."

ATTRIBUTES EYE DISCOMFORTS TO EMOTIONAL UPSET

Emotional upset from a love affair or a new job may cause eye discomforts. So says a Honolulu doctor, writing in the October issue of Archives of Ophthalmology, published by the American Medical Association.

Extreme sensitivity to light, pain in the eyes, and inability to use the eyes for close work such as reading or sewing, even for short periods, are characteristic symptoms of ocular neurosis, Dr. Wayne W. Wong says.

These and other discomforts of the eyes may be precipitated by certain stresses of living, Dr. Wong points out.

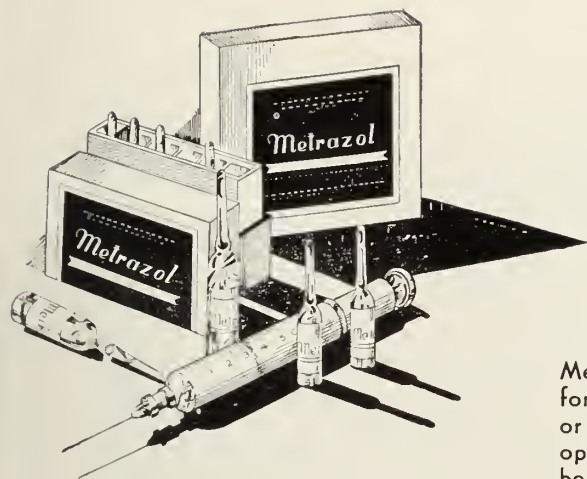
"Among such situations of stress are initiation into a job, a love affair, disappointment in vocational or financial affairs, pressure in establishing a place in the economic and social world, a death in the family, and marriage," he writes.

"Such patients tend to be of a definite physical type. Women predominate over men. In general, these patients are slenderly built. They dress neatly and well despite their actual economic station. Their habits and actions are orderly and well planned. They are endowed with a great deal of energy and 'push' and appear tireless in their pursuit of the goal that 'everything be just so.'

"This inflexibility reflects itself in their actions and thinking. Rather than adapt themselves to a difficult situation in life, they resist and balk at the expense of their emotional system.

"These patients usually have a low refractive error. They will be found to be hypermetropic. Their visual acuity is 20/20 without glasses. Lenses give only temporary relief, after which the patient feels better without them."

Many people may be wearing glasses who need treatment for the underlying emotional cause of their disturbance of vision, Dr. Wong's study indicates. In one community in which 1,000 consecutive single vision prescriptions of a moderate-sized optical house were reviewed, it was found that approximately 20 per cent of the lenses were worn by patients "whose benefit cannot be attributed to the optical effect of the lenses alone."



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Bilhuber-Knoll Corp. Orange, N. J.

Miscellany

CLINICAL SESSION AMERICAN MEDICAL ASSOCIATION

Advance registrations and hotel reservations are now being received for the 1949 Clinical Session—the third annual mid-year meeting of the A. M. A.—to be held in Washington, December 6-9.

Attention to those details at this time will assure physicians a wide choice of hotel accommodations and will eliminate all delay in registering at the National Guard Armory upon arrival in Washington. Requests for reservations should be made before November 9 and sent to the Chairman of the Subcommittee on Hotels, American Medical Association, Hotel Reservation Bureau, Star Building, Washington 4, D. C.

The Clinical Session will provide a full-scale scientific program specifically designed for the general practitioner. Outstanding physicians will discuss such subjects as diabetes, pediatrics, laboratory diagnosis, physical medicine and rehabilitation, arthritis, dermatology, x-ray diagnosis, cancer, poliomyelitis and other topics.

Typical of the complete coverage which will be given medicine in the fields in which the general practitioner is interested is the

program covering pediatrics. In sessions beginning on the afternoon of December 6 and continuing through the morning of December 9, approximately 35 papers will be presented by leading specialists from all parts of the country.

In another section, about the same number of papers will deal with the problems of delivery alone. More than 20 physicians will present their findings and views on diabetes.

One of the features of the section dealing with arthritis will be a report on the present status of cortisone and ACTH, two compounds which have opened new approaches to the treatment of rheumatoid arthritis.

Coordinated with this outstanding scientific program will be approximately 100 scientific exhibits which will present original work on the subjects discussed.

The newest offerings of 125 manufacturing firms will comprise the Technical Exposition. Here will be found the latest developments in scientific medical research, drugs and equipment.

The clinical sessions and the exhibits will be held in the National Guard Armory, Capitol Avenue and East 19th Street. The exhibit hall will be open throughout the meeting, 8:30 a. m. to 6 p. m.



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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

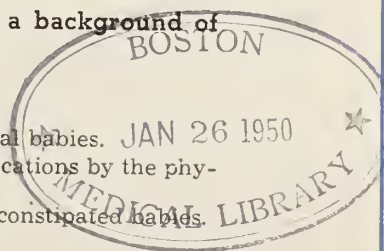
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Vol. 19

December 1949

No. 6

SADDLE BLOCK ANESTHESIA IN OBSTETRICS

CLAUDE L. BUERGER, JR., M. D.

Mobile, Alabama

Saddle block anesthesia is not the answer to the obstetrician's prayer. However, it is a valuable method and can make childbirth a relatively pain-free experience for many women. Like all forms of obstetrical analgesias or anesthetics, it may slow labor since any drug that relieves the pains of labor frequently prolongs it to a certain extent. Many drugs now in use not only retard the progress of labor but also narcotize the baby. Saddle block does not affect the infant, and, if labor is slowed, this is ultimately compensated for by the complete relaxation of muscles and tissues of the birth canal.

Most obstetricians are now familiar with the term saddle block anesthesia even though many have had no personal experience. The material for this paper was gathered from 200 consecutive obstetrical cases at Touro Infirmary, New Orleans, Louisiana. One hundred were given a saddle block anesthetic and the other hundred received a general anesthetic.

An attempt was made at the beginning of labor to decide the type of terminal anesthetic. Most patients were given various premedications early in their labor, including demerol, scopolamine, and seconal, or all three, as in the case of many primiparas. The injection was given about four hours prior to estimated delivery, the effect of the anesthetic persisting for an average of four hours and occasionally lasting up to six hours. Where delivery did not occur in the

From Touro Infirmary, New Orleans, Louisiana.

anticipated time, a repeat block was administered without hesitation.

The technique of the saddle block varied somewhat from that published by Parmley and by Adriani.¹ All the saddle blocks used in this discussion were given by trained anesthetists. The anesthetist remained with the patient until delivery was completed. The dosage used in these cases was 1 cc. or 5.0 mgm. of nupercaine, 1 cc. of 10 per cent glucose solution, and 0.5 cc. of 1:1000 epinephrin hydrochloride. It is absolutely necessary to have a clean syringe. There can be no alkali (soaps) left on the syringe as this may precipitate the nupercaine and cause a failure. A good procedure is to rinse the syringe and needles in sterile distilled water before using. A number 20-gauge spinal needle, with a short bevel, is passed into the spinal canal at L3 or L4 between contractions, and with the patient in the sitting position. Only a small amount of spinal fluid is aspirated to insure a free flow. The injection should be given in approximately three seconds with no barbotage. The patient remains in the sitting position for ninety seconds and is then quickly placed in the recumbent position with the head elevated on two pillows.

Surface analgesia is tested with a pin and should come to or slightly above the um-

1. Parmley, R. T., and Adriani, J.: Saddle Block Anesthesia. Its Application to Obstetrics, New Orleans M. & S. J. 99: 373-376 (Feb.) 1947.

bilicus.² Should the anesthesia progress higher, labor may be slowed or stopped for 20 to 30 minutes. Relief of pain is immediate, and in a short time contractions become strong and regular. It is preferable to administer the anesthetic on the delivery table where the patient may be placed in the Trendelenberg position if necessary. However, in most hospitals, one cannot monopolize a delivery table for such a long time, and in the majority of these cases the anesthetic was administered with the patient sitting on the side of a bed in the labor room. If an injection fails to take in fifteen minutes, it is repeated.

The blood pressure was recorded before and after each saddle and no significant change was noted. This does not compare favorably with all authors. For example, Schmitz and Baba² found 17.8 per cent of their patients to show a fall in pressure over 20 mm. Hg.

Nineteen per cent of the deliveries under saddle were spontaneous as compared to fifty-one per cent under general. (See Table I.) When the head reached the perineum, the patient was prepared for delivery, and in most cases episiotomy and outlet forceps were utilized.

TABLE I
METHOD OF DELIVERY

	General Anesthetic	Saddle Block
Spontaneous	51	25
Low Forceps	40	58
Scanzoni Rotation	4	9
Mid-Forceps	0	2
Internal Version and Extraction	2	0
Manual Rotation	0	4
Breech Extraction	3	2
Total	100	100

Immediately on delivery of the head, the infant's mouth and nose were aspirated to clear the mucus prior to the first breath. Most of the saddle block babies breathed as soon as the head was delivered. These babies were all pink and did not need oxygen or stimulants to initiate breathing. It has been shown that the time interval between active breathing, or oxygenation, and cessation of the cord pulsation may seriously re-

tard mental development.³ None of these babies suffered from anoxia at birth, and the ease in resuscitation of these cases is impressive as compared with those babies delivered under a general anesthetic. The cervix was inspected for laceration in all cases, and the episiotomy was repaired.

The control group consisted of one hundred consecutive deliveries, all of which received ethylene gas as the terminal anesthesia, which was administered by an anesthesiologist.

COMPLICATIONS

BLOOD LOSS

It is regrettable that I have no accurate measurements in regard to blood loss of the mothers in either series. It has been thought by many that blood loss would be greater in regional block anesthesia due to the dilatation of vessels. However, none of these cases appeared to suffer an excess blood loss in either series, which compares favorably with the findings of Andros et al.⁴

NAUSEA AND VOMITING

A small percentage of these patients became nauseated after administration of the saddle block and a still smaller per cent vomited. This was combated with oxygen inhalations with moderate success and was of no real consequence. Taggart⁵ reported that twenty per cent vomited in his series.

URINARY RETENTION

There were seven patients of the saddle block group that required indwelling catheters while there were only five in the control group. The policy of using an indwelling catheter on the third repeated catheterization was used in all these cases. This was left in place 24 to 48 hours. None, in either series, required further catheterization after removal of the indwelling catheter.

DURATION OF LABOR

As shown in Table II there was no significant difference in the duration of labor in either group.

3. Darke, R. A.: Late Effects of Severe Asphyxia Neonatorum, *J. Pediat.* 24: 148-158 (Feb.) 1944.

4. Andros, G. J., et al.: Spinal (Saddle Block) Anesthesia in Obstetrics, *Am. J. Obst. & Gynec.* 55: 806-820 (May) 1948.

5. Taggart, J. K., Jr.: Recent Advances in the Use of Spinal Anaesthesia, *J. M. A. Alabama* 16: 425-428 (June) 1947.

2. Schmitz, H. E., and Baba, G. R.: Low Spinal Nupercaine Anesthesia in Obstetrics, *Am. J. Obst. & Gynec.* 54: 838-847 (Nov.) 1947.

TABLE II
AVERAGE DURATION OF LABOR IN HOURS

	General	Saddle Block
Primiparas	15.2 hrs.	16.3 hrs.
Multiparas	8.9 hrs.	9.9 hrs.

LACERATIONS

There were twice as many lacerations in the control group. (See Table III.) This marked difference is most likely due to two factors. Under saddle anesthesia there is complete relaxation of the tissues and consequently they are able to stretch more easily than corresponding tissues that are not totally relaxed. Secondly is the complete control of the delivery that the attending physician has under saddle anesthesia. Forceps are applied, the perineum is put on stretch, and, when necessary, an episiotomy is performed. In no case is the baby suddenly forced over a tight perineum with resulting lacerations as can happen while attempting to induce the patient with a general anesthetic.

TABLE III
COMPLICATIONS

	General	Saddle Block
First Degree Laceration	15	8
Second Degree Laceration	5	2
Cervical Laceration	5	2
Retained Placenta	1	0
Premature Separation	1	0
Prolapsed Cord	1	0
Total	28	12

RETAINED PLACENTA

There was one instance of retained placenta in the entire series and this occurred in the control group (Table III).

MORBIDITY

Patients were listed as morbid if their temperature was recorded 100° F. or over on any day excluding the first postpartal day. There were nine cases of morbidity in the saddle block and seven in the control group (Table IV). No case had a recorded temperature over 101° F. The anesthetic probably had no part in any of the various causes of morbidity.

PRESENTATION

Table V lists the various presentations of all the cases. It is interesting to note that

TABLE IV
CAUSES OF MORBIDITY

	General	Saddle Block
Urinary Tract Infections	2	4
Engorged Breasts	1	1
Endometritis	1	1
Infected Episiotomy	0	1
Unknown	2	2
Total	6	9

In no case was temperature over 101° F.

there were 5 per cent more occiput posteriors in the saddle block group. This is thought to be due to the loss of tone in the muscles of the pelvic floor which probably plays a major part in the normal rotation of occiput posteriors. The majority of these occiput posteriors were rotated to the anterior position with forceps, using a modified Scanzoni technique. However, a few were rotated manually. One could not help but be impressed with the ease of any form of rotation under saddle anesthesia as compared to the same procedure under a general anesthetic. There were five breeches in the study. Saddle block may not be the ideal anesthetic for a breech delivery and should a saddle be given early in these cases they may be markedly slowed. This eliminates the spontaneous use of the abdominal muscles which will definitely prolong a breech delivery. In all of these cases saddle block anesthesia was used only as a terminal stage anesthetic.

TABLE V
PRESENTATIONS

Presentations	General	Saddle Block
LOA	46	49
ROA	40	34
LOP	0	3
ROP	4	6
ROT	4	3
LOT	2	3
RMA	1	0
Breech	3	2
Total	100	100

OTHER COMPLICATIONS

There were no serious postanesthetic headaches, no cases of meningitis, no drug idiosyncrasies, and no palsies. However,

6. Weintraub, F.: Antine, W., and Raphael, A. J.: Postpartum Headache After Low Spinal Anesthesia in Vaginal Delivery and Its Treatment, *Am. J. Obst. & Gynec.* 54: 682-686 (Oct.) 1947.

headaches have been reported,⁶ and can best be avoided by keeping the patient flat without a pillow for 12 hours following delivery.

CONTRAINDICATIONS

The same contraindications for any spinal anesthetic apply to saddle block as well. Patients with infected skin near the puncture site, patients with spinal cord symptoms, poor risk patients, such as those in coma, shock, sepsis and severe hypotension, should not be given this type of anesthetic.

CONCLUSIONS

Saddle block anesthesia is now a valuable tool that can be used by the obstetrician. Experience in the use of this anesthetic is important, and final judgment should not be based on a few cases.

Saddle block anesthesia is definitely indicated in those patients with upper respiratory infections, and in some cardiac patients. It has been my experience that once a patient delivers under saddle block she will always request that it be used again. There is no rush and hustle with this type delivery, and the obstetrician may repair the

episiotomy and any resulting laceration with meticulous care as there is no urgency to terminate the anesthetic. This is an ideal anesthetic for those physicians who care to perform occasional perineorrhaphy at delivery time.

Oxygen inhalations were given to the mothers with forceps deliveries, and on a few occasions abnormal heart tones were converted to normal using this procedure.

Two hundred cases may not give accurate statistics. However, in these few cases the saddle block series showed 5 per cent more occiput posteriors, no appreciable difference in duration of labor, fifty per cent fewer lacerations, 2 per cent more patients requiring retention catheters, less fetal anoxia, and 100 per cent satisfied mothers.

SUMMARY

One hundred obstetrical cases were given saddle block anesthesia and compared with one hundred similar cases under general anesthesia. The technique of administering saddle block was discussed, as well as indications, contraindications and complications.

PREVENTIVE MENTAL HYGIENE IN ALABAMA

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In both mental deficiency and mental disease unfavorable heredity is an important element. Mental deficiency in the children of those with normal minds may occur as the result of certain infections of the mother during pregnancy or of the child in infancy, or it may follow a cerebral hemorrhage at birth. A high proportion of the cases, however, estimated by Partlow¹ to be 80 per cent, are due to unfavorable heredity. Of the first 1,429 admissions with known parental history to the Partlow State School in Alabama, he found that 553 or 38 per cent had a feeble-minded parent. As the genes involved appear to be recessive, the defect may not be apparent in the parents or in the immediate relatives.

1. Partlow, R. C.: A Study of 838 Inmates of the Partlow State School, *J. M. A. Alabama* 14, 290, 1945.

Among the children of the feeble-minded, evidence of heredity is even more convincing. Southwick² found that 46 per cent had been in institutions for those with this defect, and a further 37 per cent were retarded. Similarly, Johnson³ found 36 per cent of the children of those who had been sterilized in New Hampshire to be mentally defective, and an additional 38 per cent retarded.

In cases of psychosis the proportion of the children inheriting the disease is smaller. It appears highest in schizophrenia and manic

2. Southwick, Walter E.: Sterilization Policy, Economic Expediency and Fundamental Inheritance, with Especial Reference to the Inheritance of the Intelligence Quotient, *J. Ment. Sc.* 85, 707 (July) 1939.

3. Johnson, B. S.: A Study of Sterilized Persons from the Laconia State School, Annual Meeting of The American Association on Mental Deficiency, April 1949.

depressive psychosis, in both of which an environment of mental strain is thought to be an important contributing factor. Kallman⁴ estimates that the probability of schizophrenia in the children of schizophrenics is 19 times that of the general population and that "more than two-thirds of the probant-children, nearly half of the grand-children, about one-third of the brothers and sisters, and close to a quarter of the half-brothers, half-sisters, great-grandchildren, nephews and nieces must be classified as eugenically undesirable types."

The environment of the children of the psychotic is also unfavorable for the best mental hygiene. The disorders of personality in a parent with psychosis are apt to cause undesirable mental developments in the children. Similarly, the upbringing of a feeble-minded parent cannot be expected to produce the best results in the child's use of its mentality whether this be normal or subnormal.

To combat these unfortunate effects of heredity and environment laws have been enacted for the sterilization of the insane and the mentally deficient. From the first, passed in Indiana in 1907, these have increased in number until they are now in effect in 27 states.

Alabama's law, passed in 1919 and slightly amended in 1923,⁵ was a simple one, applying only to the mentally deficient. It authorized the assistant superintendent of the Partlow State School to sterilize an inmate of the institution with the advice and consent of the Superintendent of Hospitals. Statistics collected by the Human Betterment Foundation of California show that it was not put into action before 1928, but that before 1930, 44 inmates had been protected. By the end of 1935 this number had grown to 224.

The procedure among the feeble-minded had proved so beneficial that it seemed worth while to extend similar protection to the insane and this was done in a bill passed by the Legislature in 1935. Before signing it the Governor asked the Justices of the Supreme Court to determine whether it was

a valid exercise of the state police power.⁶ Their opinion stated that they did not doubt the authority of the state to provide for the sterilization of persons and that this was not a cruel and unusual punishment. They considered, however, that the bill was unconstitutional in that it did not provide for an appeal to a court. Consequently, the Governor vetoed the bill. At a subsequent session the same Legislature enacted a similar sterilization law which contained the right to appeal to the courts, but the Governor vetoed this also. Efforts to override the veto failed.

Since the right of appeal had not been included in the earlier bill that law was felt to be similarly defective and has not since been applied.

The 224 cases protected from parenthood, however, represent a very real saving for the citizens of Alabama. To have given the same protection by segregation up to 1949 would have required more than 3,542 inmate years of institutional life with its unavoidable restriction of freedom. Moreover, at an estimated maintenance cost of \$300 per year (the recent cost per year has been \$510) this would have required more than \$1,062,000 from Alabama's taxpayers.

As a result of these sterilizations there are undoubtedly fewer mentally deficient in Alabama than there would otherwise have been. Johnson's study of the feeble-minded in New Hampshire indicates (assuming equal productivity) that the 224 sterilized in Alabama would, if discharged without the operation, have had 281 children. From the proportions found by Johnson and quoted above it may be estimated that 101 of these would have been mentally deficient and an additional 107 retarded. Although, as with all results of preventive medicine, those unborn children cannot be seen, they represent a very real saving of taxpayers' cost and of unhappiness of children.

That further similar prevention can readily be accomplished as soon as sterilization at state expense is made possible is shown by the findings of Partlow.¹ Among the 838 inmates of the Partlow State School, 104 would have been "parolable if sterile, with fair chance of self-support with supervi-

4. Kallman, F. J.: *Genetics of Schizophrenia*, New York, 1938, p. 265.

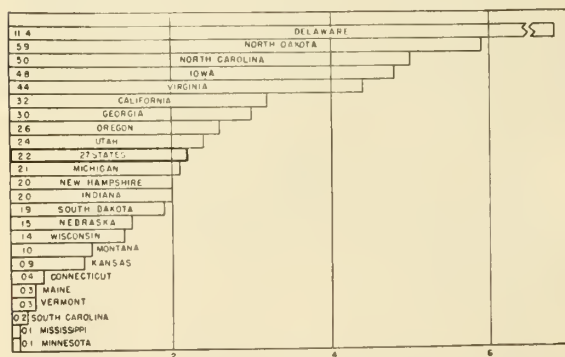
5. Code of Alabama, 1923, Sec. 1476.

6. Hughes, J. E.: *Eugenic Sterilization in the United States*, Supplement No. 162 to the Public Health Reports, 1940.

sion." It is to be hoped that the needed revision of the law will allow such inmates to be freed without the risk of producing feeble-minded children to be brought up at state expense.

Other states have been more fortunate than Alabama in that they have been able to continue the protection of the next generation by the use of their sterilization laws. Thus, in one school for the feeble-minded in California 5,112 children have been sterilized. To protect them from parenthood by segregation would have required, up to 1949, \$21,831,300 and 72,771 years of institutional life.⁷

Reports collected by Birthright, Inc.,⁸ together with the Census Bureau's estimates for 1948, have been used to calculate the sterilizations in that year per 100,000 population. The results are shown in the diagram. Alabama's maximum rate in the years of 1933-1934 of 1.4 per 100,000 may be compared with these.



Passage of an adequate law for protection of the psychotic and the mentally deficient is made difficult by the belief of the average citizen that sterilization involves a large personal sacrifice. Fearing that sexual characteristics and desires may be lost many uninformed persons hesitate to support sterilization even to protect future Alabama children from the double attack on their mental hygiene of unsatisfactory heredity and deleterious mental surroundings. That sacrifice is not involved was shown for men by Popenoe.⁹ Of 36 vasectomized men 22

noted no change in sexual activity. The 5 who reported a decrease were more than balanced by 9 telling of an increase. Similarly, Woodside¹⁰ in 48 salpingectomized women found the capacity for orgasm decreased in 5 and increased in 8.

Physicians knowing that the operation of sterilization whether in man or woman consists only of the closing of two tiny tubes and that nothing is removed from the body understand that no sexual change is involved. If they will enlighten the laity with whom they come into contact, protection from parenthood will find more ready acceptance by those for whom it is appropriate. As a result there will be much improvement in the mental hygiene of Alabama's future generations. It is probable, too, that a united effort on the part of the physicians can secure the minor amendment to the law to provide the requisite appeal to the courts. This valuable method of preventive mental hygiene can then be reinstated in Alabama.

Emotional Aspects of Physical Disease—Practically every person in the world feels at some time or other that he wants a friend or someone to understand him and the trials and vicissitudes of his life. We do not necessarily want someone to tell us what to do about these, but just to listen and give us a chance to get out the feelings we have about ourselves and the way we are living or existing. We know that the other person cannot, as a rule, do anything about it but we just want the satisfaction of knowing that someone is interested in us and our lives. We, as doctors, have accepted this role of understanding human ills.

In approaching the understanding and treatment of our patients' illnesses we can supplement our clinical and laboratory investigations by giving the patient an opportunity to express his feelings about being sick. This does not imply that we have to make a special psychiatric study of each patient, but we do want to know how he feels about himself. The important point is to show interest in him as a person and let him have the feeling that you want to understand and do accept his fears, resentments, loves, hates, ambitions, and discouragements. There will be occasional patients in whom the problems are so complex that you feel that they need special psychiatric help, but you will usually find that if you merely listen and give understanding and emotional support with an honest and open discussion of the situation as you see it, the patient will be able to go out and handle his own problems without any outside direction or advice.—*Chalmers and Woolley, J. M. A. Georgia, Oct. '49.*

10. Woodside, M.: *West. J. Surg., Obst. and Gynec.* In Press., Dec. '49.

7. Butler, F. O.: *The Mental Defective and His Future*, *Am. J. Ment. Deficiency* 54, 163, 1949.

8. Publication No. 5, Birthright, Inc., 134 Nassau St., Princeton, N. J.

9. Popenoe, P.: *Effect of Vasectomy on the Sexual Life*, *J. Abnorm. & Social Psychol.* 24, 251, 1929.

SURGERY OF THE COLON

WITH SPECIAL REFERENCE TO END-TO-END ANASTOMOSIS

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Surgery of the colon has had a long and painful development. The first colostomies for malignancy of the large intestine were done about 1750 in France. Other colostomies with improved technique were reported from France about the time of our Revolutionary War.

In 1826 Reybard of Lyons, France, reported the excision of cancer of the sigmoid with end-to-end anastomosis in one stage. His patient survived the operation and lived a year.

In 1833 Antoine Lembert of Paris reported his experimental work on dogs which allowed the edges of the guts to heal with good approximation and excellent results. To this day this type of suture is known by his name.

Kraske reported his operation for removing cancer of the lower rectum in 1885. The Kraske operation consisted in removing the coccyx and a portion of the sacrum and then amputating the rectum as high up as possible. The operation was unsatisfactory and left a perineal cloaca which was impossible to control; also, there was a high rate of recurrence.

In 1895 Paul of Liverpool, whose name is associated with Paul's tube, presented histories of seven cases in which he had performed resection of the colon with exteriorization of the bowel.

Eight years later, Mikulicz in Germany reported the same type of operation and, with better publicity, the operation came to be known by his name rather than Paul's. Germany at that time was coming to be the medical center of the world.

The great merit in this type of operation was that the patient could be cured of his cancer without dying from peritonitis.

About 1910 Halstead of Johns Hopkins reported an end-to-end operation in the rectosigmoid region, leaving within the bowel a rubber tube which extended beyond the

anastomosis and which was led out through the sphincters.

Because it was physically impossible to exteriorize the rectosigmoid and rectum, Miles of London about 1920 developed the operation which is known by his name and which consists of a radical abdominal perineal resection with a permanent abdominal colostomy.

In 1932 Babcock and his school in Philadelphia first instituted the so-called "pull through" operation. This consisted in saving the sphincters and pulling the rectosigmoid through the sphincters after the growth had been removed. We have had no experience with this type of operation, and we prefer the Miles one-stage abdomino-perineal with an abdominal colostomy which can be kept clean.

However, perhaps the greatest contribution to colon surgery was made in 1939 by Galock and Seeley who reported the effects of sulfanilamide given by mouth on the intestinal flora. Later less toxic sulfa drugs were evolved and today they form the key to the successful solution of this problem. An operation under vision with accurate approximation of the edges can now be accomplished without fear of peritonitis.

Great care and thought and attention to details are necessary in the preparation of these patients for operation. The myocardium in many of these elderly patients is already damaged and every effort must be put forth to protect the heart before, during, and after operation. Transfusions of blood are given as indicated.

PREOPERATIVE PREPARATION

The routine which we follow has been to purge the patient with large doses of castor oil or sodium phosphate. This is followed by giving twelve grammes of sulfasuxidine per day, divided in doses of two grammes every four hours. Sulfathaladine can be given in doses about one-third of this amount. The preoperative treatment usual-

ly requires four days. Reports of streptomycin given orally show that it is practically without value. No enemas are given during the twenty-four hours immediately preceding the operation. As soon as the purgative is given, the diet is restricted to clear liquids. A mixture of orange juice, Karo syrup, and water forms a good base for the diet. If obstruction is present, it is relieved either by the Miller-Abbott tube or colostomy. A right side colostomy with complete division of the colon is to be preferred rather than a cecostomy.

POSTOPERATIVE TREATMENT

Large doses of penicillin are given the first four days and continued as long as deemed necessary. Twenty-four hours after operation, streptomycin is given by needle in adequate dosage for three or four days. Clear liquids are permitted by mouth when the Wangansteen tube is removed, usually the third or fourth day.

OPERATIVE TECHNIQUE

We have used only the open method of anastomosis and have avoided the aseptic type in which it is necessary to use clamps such as the Furniss or Rankin clamp. We prefer spinal glucose-pontocain anesthesia. As soon as the anesthetic is given, the patient is placed in the lithotomy position and the rectum forcibly dilated and cleansed from below. This is important as it empties the lower segment of fluids. If the growth has been removed along with sufficient intestine below and above, the ends of the gut are then ready to be joined. The operative field is packed off with gauze and a rubber covered clamp is placed three to five inches from the open end of the upper segment of the intestine. This prevents leakage or seepage from the end during the suturing. The lower end rarely needs a clamp. A transfusion is routinely given during the operation.

The anastomosis consists of two rows of sutures. The outer stitches are of interrupted silk placed fairly closely together and they do not go through the thickness of the intestine. In other words, they bind together the outer layers of the two intestines which are being joined together.

The inner row consists of a continuous fine chromic catgut suture such as is used in a gastroenterostomy, and this is supplemented

by interrupted sutures of fine silk placed about every three-eighths of an inch around the whole circumference of the gut. These silk sutures are so introduced from the inside that when tied the knot will be within the lumen of the gut. All stitches used in the inner row pierce the entire thickness of the gut on both sides and firmly bind them together. We have routinely fixed a Penrose drain near the suture line but never in contact with it.

Three cases in which the anastomosis was below the reconstructed perineal floor were drained through the perineum just in front of the coccyx.

Not all cases in this series have been malignant. One case of obstructive diverticulitis was resected primarily with end-to-end anastomosis. However, this is exceptional, and in most cases of diverticulitis we think it safer to sever the colon in the right hepatic area, and then, after cleansing and emptying the gut, two months later to resect the affected area and perform end-to-end anastomosis. Later the colostomy on the right abdomen is closed.

In all, we have performed 40 operations of end-to-end anastomosis of the colon since 1940. Thirty of these were primary anastomosis at the time of the operation; 10 followed colostomies of some sort.

We have found the anastomosis to be much more difficult where a colostomy exists, particularly if it is on the left side of the abdomen.

No detailed study has been made of the end results, and in this small series of cases all excisions of the right colon have been excluded because the anastomosis consisted of ileum to the colon. All cases here reported were in white people, and all were private patients.

Most of the cases reported in this series have been done in the past four or five years, and sufficient time has not elapsed to make the end results worth while.

There was only one serious complication in this group of cases. This was an acute intestinal obstruction which necessitated reopening the abdomen two weeks after the primary operation. The patient had had three previous pelvic laparotomies and the obstruction was of the small intestine, due to adhesive bands. The patient made a good recovery and has remained well.

There were four deaths in the series, all in elderly patients, and only one of these was due to leakage and peritonitis. This occurred in an elderly woman, age 70, to whom an enema had been given by mistake two hours before the operation, and was unknown to the surgeon at the time of operation.

One death occurred in a man 70 years of age who was suffering from severe diabetes and myocarditis. He died six weeks after the operation. He was up and about the hospital for two weeks and it appeared that he would recover. There was no leakage and no peritonitis.

Another woman, 67 years of age, was out of bed on the ninth day and seemed entirely well. Edema and cardiac failure supervened and she died at the end of two weeks.

The fourth case was a woman 60, operated upon for acute obstruction. She died four days later from anuria. Less than two

ounces of urine were passed during the four days she lived.

SUMMARY

In such a small series of cases it seems unwise to draw general conclusions. Counting the four cases that died, we have a mortality rate of 10 per cent. Three of these died from medical complications, that is, failure of heart and kidneys. This leaves a surgical death rate of 2½ per cent.

In this series there have been no proximal vents to relieve distension on the intestine except in those cases which already had a colostomy prior to the operation of end-to-end anastomosis.

In view of the above facts, we feel that where the anastomosis can be made without tension and when the edges of the intestine have good circulation that this is the operation of choice.

CHLOROMYCETIN THERAPY IN ROCKY MOUNTAIN SPOTTED FEVER

REPORT OF TWO CASES

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Rocky Mountain spotted fever is a rickettsial disease of high mortality endemic in this section of the country. Before the introduction of chloromycetin by Erlich and his associates, there was no known specific therapy for this disease.¹ The demonstration of the efficacy of chloromycetin in the treatment of Rocky Mountain spotted fever was reported in 1948.² In this report, seventeen cases of clinically diagnosed Rocky

Mountain spotted fever were treated with chloromycetin. In all of these cases the drug effected a rapid remission of the disease. There were no deaths. Improvement in the patient's symptoms was uniformly observed in the first twenty-four hours after the institution of therapy.

REPORT OF CASES

Case I: This white female child, aged four years, was seen in the Outpatient Clinic with a history of chills and fever. There had been a history of a tick bite approximately one week before admission. On examination the skin was hot and dry and the temperature was 103° F. There was a rapid respiration. Edema of the periorbital tissue

1. Erlich, J.; Bartz, Q. R.; Smith, R. U.; Joslyn, D. A., and Burkholder, R. R.: Chloromycetin, A New Antibiotic from Soil Actinomycete, Science, 1947, 106,417.

2. Pincoffs, M. C.; Guy, E. G.; Lister, L. M.; Woodward, T. E., and Genadel, J. E.: The Treatment of Rocky Mountain Spotted Fever with Chloromycetin, Ann. Int. Med. 1948, 29, 656.

and around the ankles was present. At this time there was no rash. Forty-eight hours later the patient returned to the hospital in coma, and there was a macular rash over the entire body, more noticeable over the extremities and the palms of the hands and soles of the feet. The patient was unable to swallow fluids and the temperature at this time was 104° F. Twelve hours later the rash had definitely become purpuric in nature and was now coalescent. At this time the patient presented a picture of peripheral collapse. The diagnosis of Rocky Mountain spotted fever was made and chloromycetin was prescribed. In addition, parenteral feedings by stomach tube were instituted. The blood serum showed a positive reaction to OX 19 in dilution 1:320. The white blood count was 11,150, with polymorphonuclears 69 per cent, lymphocytes 28 per cent, monocytes 3 per cent; hemoglobin 50 per cent. The urinalysis was negative with the exception of one plus albumin. Chloromycetin was administered, 50 milligrams per kilo, initial dose, by stomach tube. An additional 250 milligrams were administered every three hours the next five days. Within forty-eight hours the temperature had remitted and the patient regained consciousness. Recovery was uneventful.

Case II: This eleven year old child, sister of Case I, was seen four days after complaining of multiple tick bites over the body. She had been sick for forty-eight hours before admission to the hospital. On admission the patient's temperature was 104° F. There was a macular rash over all the extremities, including the palms of the hands and soles of the feet. In addition, the rash involved the body. Laboratory findings showed white blood count 5,250, with 92 per cent hemoglobin, polymorphonuclears 68 per cent, lymphocytes 31 per cent. Urinalysis was negative. The blood serum showed a positive reaction to OX 19 in dilution 1:320. Chloromycetin was administered in the same dosage as Case I. Within forty-eight hours the temperature had remitted and the patient had an uneventful recovery.

COMMENT

Chloromycetin is a drug isolated from liquid cultures of the streptomyces. Originally isolated by Burkholder, it was shown by him to possess antibacterial activity.¹ It is

a crystalline substance relatively insoluble in water, but it is well absorbed from the gastro-intestinal tract. This latter quality makes the oral route of administration the most efficacious.

Recent reports suggest that the therapy with chloromycetin administered orally in man has been associated with a paucity of toxic manifestation.² There was no toxicity to the drug noted in our cases.

The dosage regimen adopted was that reported as effective in scrub typhus.³ An initial dose of 50 milligrams per kilo of body weight was administered to both patients. This was followed by a dose of 250 milligrams every three hours until approximately 30 grams had been given. Both cases recovered dramatically. One case was in a comatose condition when admitted and within twelve hours marked improvement was noted.

SUMMARY

A report of two cases of Rocky Mountain spotted fever treated with the new antibiotic, chloromycetin, indicate that this drug is an effective agent in this disease.

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

CASE PRESENTED BY
BENJAMIN P. CLARK, M. D.

A two year old white female was brought to the Children's Clinic because of fever, vomiting and a mass in the upper abdomen. The child had not been well for about a month. She vomited most all foods except milk and appeared to be losing weight and strength. She had been much worse during the three days previous to admission. She was now vomiting everything and having fever. The mass in the abdomen had been noted about three days prior to admission. Physical examination revealed a chronically and acutely ill child who was pale, febrile and exhibited in the upper abdomen a round firm mass the size of a small orange. This mass occupied the right upper

3. Snodel, J. E.; Woodward, T. E.; Ley, H. L., Jr.; Philip, C. B.; Trout, R.; Lewthwaite, R., and Savor, S. R.: Chloromycetin in the Treatment of Scrub Typhus, Science (in Press).

quadrant near the midline and extended up under the anterior ribs bulging these ribs forward. It was firm, smooth and tender and there was no fluctuation. It was directly under the anterior abdominal wall and there was no bowel overlying it. It appeared to be well fixed.

Laboratory examination showed erythrocytes 3,570,000; leucocytes 15,600; hemoglobin 5.2 gm.; polymorphonuclear leucocytes 75 per cent; and the urine was clear.

An x-ray of the chest and abdomen showed an area of increased density adjacent to the right leaf of the diaphragm. This leaf of the diaphragm did not descend under fluoroscopy or move as well as the left one did. The diaphragm appeared to be slightly elevated but normal in contour. No gas bubble was seen. The outline of the liver appeared to be moderately enlarged. No evidence of a rib lesion was seen. In the base of the right lung there was an area of increased density, probably atelectatic lung.

On admission to the hospital, penicillin was started. Within forty eight hours the mass began to feel fluctuant. The child was given a blood transfusion, and twenty-four hours later Dr. John R. Hamilton made a small incision in the anterior abdominal wall into the fluctuant area.

A moderate amount of thick creamy pus was obtained. The abscess area was explored digitally and found to be beneath the diaphragm and superior to the liver. Drainage tubes were placed well down into the abscess cavity and the small incision closed around them. Three days after surgery the child was greatly improved, having a normal temperature. Cultures of the pus obtained revealed a staphylococcus. The wound continued to drain profusely for about a week after incision. The child has been well since discharge.

DISCUSSION

Attempts were made to elicit a history suggestive of a perforated appendix but without success. Therefore, the origin of this subphrenic abscess must remain in doubt. The absence of colon bacilli would seem to be against a perforated appendix, as was the history. We were agreeably surprised that this abscess drained so well and appeared to clear up completely following the simple drainage. X-ray film of the

chest made prior to discharge showed that the area of lung atelectasis superior to the diaphragm had also cleared up following the drainage. Before the mass became fluctuant, we were considering the possibility that we were dealing with a neoplasm.

Psychosomatic Therapy—Although it is obvious that each physician must gain his technique of psychotherapy through personal experience, useful aids that have been learned by others can be adopted by all. George F. Sutherland has summarized some of the facts that the practitioner should remember. He recommended that the physician keep in the background, allowing the patient to establish a friendly rapport by helping him realize his need for treatment yet giving him some face-saving device and reassurance. The therapist should be alert to the patient's "double talk," the symbolic expression of his emotional reaction to the events which he recounts. The less the therapist contributes to the conversation, the more information he will derive. A psychotherapeutic interview is often a battle of wits between the patient and the practitioner, with the patient intuitively laying traps for the therapist. The patient constantly tests the therapist, who must meet the challenge in a manner that satisfies the patient yet return the challenge to him to deal with the neurosis and its conflicts.

A knowledge of unconscious mechanisms enables the physician to steer the conversation so that the patient, without apparent effort on the part of the therapist, becomes aware of the hidden meaning of his double talk and therefore may deal with it realistically. The development of his symptoms is a protective mechanism, and he is reluctant to part with them. It is therefore impossible for the physician to tell the patient what is wrong at the beginning of treatment because he will not believe it. He has arrived at his own particular symptoms by a process of unconscious emotional logic and believes in them.

Sutherland added that one of the chief objects of psychotherapy is to "encourage the individual to strive for emotional maturity; that is, to make decisions without suffering from guilt feelings." The therapist must guard against becoming angry with the patient, allowing the patient to express his hostilities. Treatment is a painful process for the patient, and the physician can reduce anxiety and lessen guilt feelings, thereby making the patient feel more comfortable. The beneficial effects of therapy will often become apparent when least expected.

To avoid increasing the anxiety to such an extent that the patient becomes incapacitated, the therapist should proceed slowly and "limit the dose" of psychotherapy. When the patient develops antagonism toward the physician, the physician must recognize it for what it is and try to absorb the feelings without a display of emotions.—*Hauser, Texas State J. Med., Oct. '49.*

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**GEORGE H. LANIER MEMORIAL HOSPITAL
DEDICATED**

The George H. Lanier Memorial Hospital at Langdale in the Chattahoochee Valley was dedicated on November 16.

The hospital, as the name implies, is a memorial to the late George H. Lanier, beloved friend, philanthropist and industrialist of The Valley, under whose leadership The Chattahoochee Valley Hospital Society, a non-profit organization, was incorporated in 1942. World War II interrupted the plans of the society, so that it was six years later, April 18, 1948, before the ground breaking ceremony was held, and the actual construction of the hospital was begun.

It was the first hospital in the nation to receive a federal grant under the Hill-Burton Hospital Act. Before the grant was made, however, generous contributions to the building fund had been made over a period of several years by West Point Manufacturing Company, The Lanett Bleachery and Dye Works, employees of these two industries, and many other citizens of The Valley and outside friends.

The total cost of the building and equipment was approximately \$2,100,000. Donations included the following: West Point Manufacturing Company, \$925,000; The Lanett Bleachery and Dye Works, \$215,000; in-

dividual contributions, \$235,000; federal grant, \$701,000. The architect was Robert & Co. Associates, of Atlanta; the contractor, Batson-Cook Company, of West Point.

Built to serve the industrial Valley and adjacent areas in east Alabama and west Georgia, the George H. Lanier Memorial Hospital is pronounced by experts to be one of the most modern in the nation with regard to structure, equipment, and facilities. Its laboratories, x-ray, operating and delivery rooms, and many other available services assure patients of the very best in medical care. At present the hospital contains 90 beds, with all basic equipment installed for enlarging the hospital to 200 beds when the need arises. The same equipment and services are provided for white and colored patients.

The fireproof building is modern in design, constructed in the shape of a cross, with canopies over entrances and windows, affording clear vision, ventilation, and comfort. Approximately one-third of the building has a rock foundation; while the remainder rests on decomposed rock, or shale. The wings are designated by the four cardinal points of the compass; North, East, South, and West.

The north and south wings are three stories; the east wing is four stories; while the west wing is two stories. The floor levels are designated as: subbasement, first floor, and second floor. The boiler room is on a fifth and still lower floor level, adjoining the east wing right corner. On top of the north wing is a spacious sun deck where convalescing patients may relax in the fresh air and sunshine.

Only a visit to the hospital, with inspection of its many areas and departments, will reveal its superior advantages for patients, doctors, and hospital personnel. Nothing has been spared to make the hospital an adequate institution. It is a credit to the community. It reflects the community spirit of The Valley and is a fitting memorial to the beloved friend and leader, the late George H. Lanier.

A. A. G. P. CHARTER MEMBERS

The Alabama Academy of General Practice has for the last few months been conducting a membership campaign. Charter membership is now closed, but any qualified

physician is urged by the Academy to send in his application blank.

Physicians who are charter members in the Academy are listed as follows: John Robert Armistead, Prichard; T. J. Anderson, Greensboro; James H. Armstrong, Selma; William J. Barber, Butler; Rhett G. Barnes, Birmingham; Julius E. Beck, Mobile (deceased); William Avera Blake, Mobile; Nathan Bogard, Montgomery; Brown H. Boswell, Montgomery; Leland L. Brown, Mobile; Raphael John Ceravolo, Mobile; F. L. Chenault, Decatur; Alfred Major Chilton, Anniston; Wesley C. Corson, Montgomery; Albert S. Dix, Mobile; Robert Emmett Dixon, Alberta; Jack L. Dozier, Fulton; James F. Dumas, Mobile; William Emille Ehlert, Selma; Francis T. England, Mobile; Milner Hubbard Eskew, Sr., Uniontown; William Gorgas Fonde, Mobile; John E. Foster, Lineville; James Henry Goode, Tuscaloosa; Reuben J. Guest, Jr., Fort Payne; Loren Gary, Jr., Tuscumbia; Edward L. Gibson, Enterprise; Joseph Brown Graham, Mobile; Robert E. Hale, Bellamy; Esau A. Harris, Bessemer; Vivian H. Hill, Mobile; John L. Hillhouse, Birmingham; E. Julian Hodges, Scottsboro; Leslie Howell Hubbard, Montevallo; Marston T. Hunt, Boaz; A. L. Isbell, Albertville; Albert F. Jackson, Tuscaloosa; John Paul Jones, Camden; Benjamin Burford Kimbrough, Mobile; Elmer J. Kocour, Montgomery; Clement A. Lightcap, Mobile; Ernest Odell Majure, Tallassee; Hobson Manasco, Haleyville; Robert A. Martin, Pell City; Edwin D. Morton, Prichard; Leon V. McVay, Mobile; Ralph D. Neal, Grove Hill; C. W. Neville, Birmingham; George W. Newburn, Jr., Prichard; William Noble, Fort Payne; Eldridge T. Norman, Greensboro; W. J. B. Owings, Brent; Clarence Vearn Partridge, Mobile; Julius A. Pennington, Whistler; George S. Peters, Montgomery; Alsey C. Pratt, Jr., Centreville; Alice Hill Pye, Montgomery; Cecil H. Ross, Mobile; Paul P. Salter, Eufaula; Wilbur M. Salter, Anniston; Thomas J. D. Scanlan, Montgomery; William L. Smith, Montgomery; Philip V. Speir, Greenville; Chester P. St. Amant, Jr., Atmore; Selden Stephens, Mobile; Willie Elijah Stinson, Marvel; Charles D. Terry, Mobile; Thomas E. VanSant, Piedmont; William B. Virgin, Montgomery; Jonathan R. Williams, Selma; Robert C. Winslow, Sylacauga; Arthur F. Wilkerson, Jr., Marion;

Carlton W. Winsor, Spring Hill; Gerald Guinness Woodruff, Anniston; John Arthur Zieman, Mobile; and Arthur M. Cowden, Crichton Sta., Mobile.

VERTIGO

"The term 'vertigo' has been subjected to a great deal of abuse. It is not synonymous with 'dizziness,' which is an extremely common symptom encountered almost daily by the practitioner of general medicine. Vertigo implies a sense of rotation with reference to surrounding objects in space and a loss of the sense of equilibrium. The patient complaining of this symptom is aware of some difficulty in the postural mechanism, and has a feeling of insecurity, especially in the upright position, when a sensation of falling or veering to one side is present. It is often a disabling and alarming symptom, and one for which the patient will almost invariably seek medical attention. When resulting from disease involving the peripheral labyrinth or auditory nerve, it is associated with tinnitus and deafness.

"In contrast are a group of subjective manifestations variously referred to by the patient as dizziness, lightheadedness, giddiness, faintness, swimming sensation, fog before the eyes, blackout and so forth. Such symptoms are often seen in a variety of functional and organic disturbances, and should be differentiated from what is considered true vertigo. Differentiation is made possible by an accurate description of the sensation experienced by the patient, and by the evaluation of associated symptoms and underlying or predisposing conditions. From the standpoint of the internist, these subjective complaints are far more frequently encountered than true vertigo. Thus, they may comprise part of the symptomatology of neurosis, cerebral arteriosclerosis, hypertension, various other cardiovascular disorders, endocrinopathies, infectious diseases, gastrointestinal disturbances, sudden changes in posture, blood loss, other conditions causing cerebral ischemia and so forth.

"Perusal of many of the modern textbooks of medicine readily demonstrates the common misuse of the term vertigo, when actually the subjective sensation of dizziness or one of its many equivalents is meant. Thus, vertigo is listed as a symptom of a host of medical ailments, among them car-

diac arrhythmias, heart block, cardiac failure, carotid-sinus syndrome, hyperthyroidism, hypoglycemia, Addison's disease, anemias, menopausal syndrome and gastritis, to mention only a few. True vertigo is generally not encountered as part of the symptomatology of these disorders. Dizziness and its many variants, however, are quite common.

"Apart from pure neurologic and otologic entities, the internist is apt to see vertigo as a manifestation of one of the following: hypertensive cardiovascular disease, leukemia and drug intoxication."

The above are the opening paragraphs of the recent article by Aisner,¹ in which he discussed this rather neglected subject. The Boston investigator goes on to state that "intoxication with drugs such as quinine, quinidine, cinchophen and the salicylates may produce the symptoms of vertigo, tinnitus and decreased auditory acuity. This has been attributed to functional impairment of the eighth nerve. The administration of streptomycin has frequently resulted in vestibular dysfunction and less commonly in deafness. The occurrence of such disturbed function is related to both the size of the dose and the duration of treatment. More recently, with the accepted lower dosage schedules for the treatment of streptomycin-sensitive infections, less difficulty with labyrinthine function has been experienced. However, patients on the same dosage of the drug differ considerably in their susceptibility to these so-called toxic manifestations. The rotary component of vertigo is often absent in these persons, although difficulty with the postural mechanism is characteristic. Frequently, they experience the sensation of overshooting the mark when a sudden movement is made. For example, in reaching for an object, the hand may continue its progress for several inches beyond the object, or rolling over in bed may convey the sensation of continuation of that act. The pathologic changes resulting in these symptoms have been localized by some to the ventral cochlear and inferior cerebellar nuclei, although recently additional disturbance in the peripheral mechanism has been postulated."

1. Aisner, Mark: Vertigo as It Confronts the Internist, *New Eng. J. Med.* 241: 145 (July 28) 1949.

Aisner's short but good discussion of vertigo calls attention to the confusion existing in regard to the terms "vertigo" and "dizziness." Every practicing physician is aware that the public and, to a considerable extent, the profession itself is careless and inexact in this regard. But it does come as a surprise to read his assertion that "even in modern textbooks" the same error is frequently made. And he is certainly upon very firm ground indeed in his final paragraph: "Vertigo not attributable to any of the causes already discussed falls into the realms of the neurologist and otologist, and may be a manifestation of disease of the labyrinth, the brain stem or the cerebrum. Under such circumstances, the internist, who is apt to see these cases first, must seek proper consultation. A history of recurring episodes of vertigo associated with fluctuating tinnitus and deafness may indicate Meniere's syndrome, which the internist may take upon himself to treat. In patients presenting vertigo as a symptom for the first time, consultation seems in order. Careful history taking and physical examination may be of value in the choice between neurologist and otologist. For example, persistent and progressive vertigo, disturbances in consciousness, memory defects and the presence of cranial-nerve palsies point to a lesion in the central nervous system and the advisability of neurologic consultation."

ADVANCING PUBLIC HEALTH

Plans for advancing public health were discussed and mapped out at the 48th annual conference of the Association of State and Territorial Health Officers with the Public Health Service and the Children's Bureau of the Federal Security Agency in Washington October 19-22.

Participating in the conference also, as in recent years, were State Mental Health Authorities and representatives of State Hospital Survey and Construction Agencies. Representatives of all 48 states and four United States territories attended.

Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, told the conference that "public health is coming of age." He called for better management of long existing public health programs, careful nurture of new programs, and provision for

sound administration of programs yet to be born. . . .

Dr. Scheele told the conference of areas of public health responsibility which he foresaw would increase rapidly in importance. Housing should be a "high-bracket must" in the environmental health field. Home accidents, ranking ninth last year as a leading cause of death in the United States, must be considered. Immediate and long-range public health interests ought to be taken into account in planning for civil defense, he said.

Providing 24-hour-a-day health protection for workers in their living and working environments is a job for public health agencies, local, state and national, and one in which they must cooperate with any and all other agencies which have anything to contribute, Dr. Scheele said.

"The record of state health services for mothers and children is one of the exciting success stories of the last decade," Dr. Leona Baumgartner, Associate Chief of the Children's Bureau, told the Conference. "Across the country, these services are showing a vitality, individuality, and vision that are a credit to state health officials and citizens."

Three problems seem to be of top concern to the states planning for the future, Dr. Baumgartner observed. One is shortage of personnel. "We need to do more than send more people to public health schools; we should give them more opportunity for internships in the field where they can acquire a practical know-how. Second, more should be done on specific problems, such as prematurity which is the 8th leading cause of all deaths. Third, more funds are needed for research to get answers to many unanswered questions; what, for instance, are the most effective tests of vision and hearing to use with children?"

Commenting on the widespread interest in health services for school-age children, Dr. Baumgartner urged the closest teamwork among all the various professional workers involved in building sound programs. "As a nation, we are spending great amounts of money on present health services for school children, but we don't know what we are getting for the money," she remarked. "I know of no large industry that spends such large amounts of money without giving an accounting of the results of these expenditures. Just to spend more money in

the same way we are doing now isn't good enough."

Five medical authorities in highly specialized fields of maternal or child health, it was reported at this session, have been appointed recently as part-time consultants to state agencies requesting counsel on clinical aspects of their programs.

In a special session with the Children's Bureau, the conferees heard discussion of programs for premature infants conducted in Colorado, Massachusetts, Virginia, and New York. Challenging state health departments to do more to save the lives of prematurely-born infants, Dr. Harry H. Gordon of the University of Colorado Medical School said: "In the long run the most effective methods of reducing infant mortality, due to premature birth, must depend on the concerted efforts of private and public agencies, as well as individuals, all under the leadership of state health departments." Dr. Vlado Getting, Massachusetts, reported that services for prematures in regular maternity wards have been started in 47 hospitals in his state, but that the program will have to be greatly expanded to care adequately for the hundreds of these babies born each year. Dr. A. L. Carson, Virginia, stressed the importance of good maternal care as a preventive of premature births, and Margaret A. Losty, New York City Health Department, urged that nurses and doctors, caring for prematures, have special training for their job.

Dr. Wilton L. Halverson, California State Director of Public Health, San Francisco, California, was elected President of the Association, to succeed Dr. R. H. Hutcheson, Tennessee Commissioner of Public Health, Nashville, Tenn., whose term expired. Other officers elected by the Association were: Dr. R. L. Cleere, Executive Director, Colorado State Department of Public Health, Denver, Colo., vice-president; and Dr. L. E. Burney, Indiana State Health Commissioner, Indianapolis, Ind., secretary-treasurer, who was named to succeed himself.

Elected to the Executive Committee of the Association were: Dr. F. C. Beelman, Secretary and Executive Officer of the Kansas State Board of Health, Topeka, Kansas; Dr. N. H. Dyer, West Virginia State Health Commissioner, Charleston, West Virginia; and Dr. Vlado A. Getting, Massachusetts

Commissioner of Public Health, Boston, Mass.

SENSITIVITY TO ALGAE

In commerce and in the food and drug industry, human beings often become allergic to vegetable gums which are used extensively as thickening, suspending, stabilizing, emulsifying, gel-producing, film producing and adhesive agents in numerous foods, cosmetics and industrial products. Among those gums which are so employed most commonly are locust bean, karaya gum, gum arabic, tragacanth and Irish moss. Instances of patients allergic to these have been reported in the *Annals of Allergy*, the official publication of The American College of Allergists.

Roy A. Ouer, M. D., of San Diego, California has recently reported in the *Annals* his investigation on the gum extracted from giant sea kelp to determine whether it is easy for individuals to become allergic to it and whether it would make a good substitute for these other gums in event the development of allergies might make such a substitution necessary.

Dr. Ouer found that it is not at all easy to become allergic to the kelp-gum and that very few people are ever allergic to it.

In commenting upon these findings, Dr. Jonathan Forman, President of The American College of Allergists pointed out that hundreds of thousands of people in this country are eating kelp pills regularly to get their quota of trace minerals. Dr. Ouer's findings are therefore important to this large group of citizens.

They should be warned that, though it is not a frequent occurrence, they can become allergic to this kelp and so they should always tell their physician about having taken them. Dr. Ouer's results will come, Dr. Forman said, to those who have developed hay fever, asthma, or intestinal complaints due to the fact that they become allergic to their wave-set. They will be relieved to know that in kelp-gum they may have a good substitute.

MOLD FUNGI

Marie Betzner Morrow and her associates at the University of Texas, report in the current issue of the *Annals of Allergy* that the

spores of fungi producing several plant diseases get into the air and thus may be scattered widely, becoming the cause of the symptoms of hay fever or asthma in man.

In most studies of the spores of fungi in the air, the methods used have missed the spores of these fungi which produce disease in plants. Morrow et al. urge more investigation of these fungi as a cause of allergy. Such studies are going forward on a cooperative basis by some fifty allergists scattered throughout the country under the direction of Homer Prince, M. D., of Houston, Texas, Vice-President of The American College of Allergists.

SEX HORMONES RELIEVE BREAST CANCER PAINS

The use of sex hormones in the treatment of breast cancer in advanced stages, while not effecting cures, can alleviate pain, a Chicago physician reports in a recent issue of *Radiology*, a journal devoted to clinical radiology and allied sciences.

A preliminary report on results in a nationwide clinical study being made under the sponsorship of the Therapeutic Trials Committee of the Council on Pharmacy and Chemistry, American Medical Association, is made by the committee's secretary, Dr. Walton Van Winkle, Jr.

"Of 77 cases of breast cancer with bony metastases which have received up to one year's treatment, 45 per cent have shown a response to testosterone therapy although only 13 per cent have shown objective improvement," Dr. Van Winkle reports.

"The results of testosterone therapy in 17 cases of breast cancer with only soft tissue lesions show a similar incidence of objective improvement, but the degree of subjective response is slightly lower than in the cases with bony metastases.

"Of 21 patients with breast cancer receiving estrogen therapy, five showed objective improvement."

The objective improvement included healing of ulcers, disappearance of palpable lymph nodes, regression in lung lesions and decrease in the size of livers suspected of containing metastases, he adds. The subjective improvement in the main was relief of pain, which is an outstanding feature of bony metastases and less predominant in the soft tissue lesions.

Dr. Van Winkle points out that all of the cases covered in the study were considered to be inoperable. In the vast majority of cases irradiation therapy had been administered sometime prior to admission and either no further benefit was being obtained or the lesions were so extensive as to make further irradiation impracticable.

"The mortality figures indicate clearly that many of the cases were moribund on admission to the study, dying within a few weeks or months," he reports. "It should be noted that objective improvement, when it occurs, usually does not manifest itself for at least three months after the treatment is begun. If the patients dying in the first month of therapy are eliminated, the percentage of favorable response is greatly increased.

Discussing the effect of hormone therapy on the extension of life expectancy, Dr. Van Winkle says:

"It is not believed that even the most enthusiastic proponent of hormone therapy of breast cancer feels that patients with malignant lesions can be cured by this form of treatment. It may be possible, however, in suitable cases to prolong life and it seems quite probable that many patients can be made comfortable and relatively happy during the greater part of the time, even though they die of their disease at precisely the time they would have died had they not received treatment.

"In other words, it seems probable that in some patients the hormones may be an additional palliative measure which may be used either when surgery and irradiation are not available or when no further benefit can be expected from them."

He says it is not possible at this time to define the place of hormone therapy in breast cancer except to state that it may be tried when all other forms of therapy have been given an adequate trial and have failed. Neither androgens nor estrogens should be used in lieu of surgical measures or irradiation, he concludes.

Because of the potency of the materials, he advises caution in the use of hormones. The selection of cases for this type of therapy is important and it is not a procedure for general use, he warns.

Dr. Van Winkle emphasizes that the results reported are "purely preliminary and will undoubtedly be altered as the study

progresses." The study, which is being coordinated by the Therapeutic Trials Committee, is being conducted by leading medical schools, hospitals and clinics all over the country. Among the objectives are determination of what manifestations of the disease will respond to hormone therapy; what the effects are on life expectancy, comfort and activity; minimal effective dosages of testosterone and duration of treatment, and which estrogens are more effective.

The medical profession has been measuring cancer "cure" results on freedom of the disease three or five years after treatment. Consideration is being given to reporting in terms of percentage of normal life expectancy instead, Dr. Van Winkle says.

"It is obvious that a five-year survival in a woman aged 65 is of a different significance than a five-year survival in a woman aged 30," he writes. "The age factor is of importance in the evaluation of results of cancer therapy, and it is believed that the introduction of the factor of life expectancy into this evaluation will result in a more realistic appraisal of the results of therapy."

RADIUM NEEDLES AID IN WAR ON CANCER

Needles, similar in appearance to those used in sewing but containing a tiny amount of radium whose activity is maintained for more than 2,000 years, are playing an important role in the war on cancer.

These low intensity radium needles constitute an economical, highly efficient addition to the tools of the physician who strives for a cure and best possible results with a minimum of danger to his patients and to himself, according to Dr. Charles L. Martin of Dallas, Texas. Dr. Martin, writing in the October issue of the American Journal of Roentgenology and Radium Therapy, reviews the successful use of the needles in the treatment of accessible malignant tumors.

The radium needles come in lengths from four-tenths of an inch to about two inches. They are hollow and are constructed of gold or platinum-iridium. The wall thickness around the tiny particle of radium is about a half millimeter. This is sufficient to provide proper filtration of the rays. The entire thickness is about $1\frac{1}{2}$ to $1\frac{3}{4}$ millimeters.

The low intensity needles are stitched in place and attached to a guy thread so that they can be recovered. They may be used over and over because of their almost unlimited life. The needles are retained in position for seven days and are then removed, usually without an anesthetic.

"Under ideal conditions the radium reaction reaches its peak in about three weeks and has subsided in six weeks," Dr. Martin writes. "Healing requires periods varying from six weeks to several months, depending upon the size of the area treated."

He cites the safety factor in the use of the needles, saying:

"Everyone engaged in radiation therapy should give some thought to protecting himself against the hazards of his profession. Far too many have developed severe anemias and leukemias and the hands of most of the pioneers active in the development of radon seed techniques show serious damage.

"Departments of roentgenology are now provided with protective devices which should insure the health of those who work in them, and workers using radioactive materials should receive equal protection. It is my opinion that low intensity radium element needles can be used so as to produce the least hazard of any of the radioactive sources available for therapy.

"The permanent heavy filter and the small amount of radium in each container reduces the intensity of radiation to which the operator is exposed during the short time needed for an implantation to a very low figure. Since all manipulations are done with instruments and since the amount of radiation delivered at a distance of 2.0 centimeters from the center of a low intensity needle in a few hours is almost negligible, the reasons for this statement are obvious. When the tips of the finger are used to tie sutures or to facilitate the removal of a deep-seated container they are only brought near the ends of the needles which give off very little radiation."

Dr. Martin points out that in southwestern United States the treatment of cancer of the exposed skin surfaces constitutes one of the major problems encountered in a tumor clinic. Many of these lesions respond to low intensity radium needle implantations which never produce nerve injury, he says.

He reports on results in the use of radium needles. In 96 cases of advanced skin cancer of the face, neck and ears, 32 were well after five years. These patients, he points out, were worst cases and most of them quite old. Some of the deaths before five years occurred as a result of cancer elsewhere or from other causes. The primary lesions healed satisfactory in 60 per cent of the series, he says.

Cancers of the eyelids, lips, tongue, cheek, mouth, neck and female pelvis are others which react encouragingly to the use of radium needles, he reports, presenting statistics on results.

CORRESPONDENCE

THE NATIONAL FOUNDATION
FOR INFANTILE PARALYSIS, INC.
120 BROADWAY
NEW YORK 5, N. Y.

November 4, 1949

To the Editor:

There have been many inquiries recently regarding the arrangements for covering the cost of care for poliomyelitis patients. There are a number of factors which will be of interest to your readers.

During 1949 a poliomyelitis incidence of unprecedented size (more than 37,000 stricken since January 1) has put serious financial strain upon the National Foundation for Infantile Paralysis. For the first time in its eleven-year history it was necessary to conduct a Polio Epidemic Emergency Drive which, although very helpful, did not entirely meet current needs.

In its avowed purpose to lead, direct and unify the national fight against infantile paralysis the National Foundation undertook support of research and education, for in these areas lie the ultimate hope for eradication of poliomyelitis. These programs are not to be compromised in any way.

The greatest cost to the National Foundation, however, is payment for medical care to patients. It is urgent for all physicians to assist in the institution of measures which will reduce costs without prejudice to patients. The chief costs are for hospitalization. Many poliomyelitis patients are hospitalized when they can be cared for at home at a reduced cost.

Our experience in this year's epidemic which has spared virtually no part of the country suggests the following:

1. Abortive, nonparalytic and mildly paralytic poliomyelitis patients are being hospitalized in the mistaken idea that the stated period of isolation must be spent in the hospital.

2. Overly prolonged hospitalization is frequent. This is particularly true of the paralytic patient who has achieved maximum improvement from daily physical therapy. Home care with periodic office or clinic visits is then in order.

3. There still exists in some places a general attitude that poliomyelitis is a bizarre disease which only a few physicians can manage. This is not so. It is disturbing, for example, to find physicians leaning so heavily upon the guidance of physical therapists and nurses. The physician's assessment of the total patient is the best index in determining when a patient shall leave hospital to receive home, office or clinic care.

4. Patients hospitalized on general ward services are not charged medical fees ordinarily. When patients are hospitalized on isolation wards for poliomyelitis, however, bills for medical fees are at times submitted. Payment is frequently made by the local chapters of the National Foundation whose treasuries are now generally depleted.

It is hoped that your readers will understand clearly how urgent is our need for cooperation from all practicing physicians in the matters mentioned above.

Sincerely yours,
Hart E. Van Riper, M. D.
Medical Director

MEETINGS

CONFERENCE ON CARDIOVASCULAR DISEASES

Dr. Paul D. White, former President of the American Heart Association and now Chief Medical Advisor to the National Heart Institute of the U. S. Public Health Service, has been named chairman of the steering committee for a National Conference on Cardiovascular Diseases to be held January 18-20, 1950, at the Mayflower Hotel, Washington, D. C.

The conference is jointly sponsored by the National Heart Institute and the American Heart Association. Dr. C. J. Van Slyke, Director of the Institute, and Dr. H. M. Marvin, President of the American Heart Association, are its co-chairmen.

Dr. White, one of the nation's leading cardiologists, was chosen chairman at an organizational meeting of the steering committee held in New York. The committee, which is now planning the agenda for the conference, comprises 25 leaders in all fields concerned with diseases of the heart and circulation, representing both voluntary and official agencies throughout the country.

In making the joint announcement, Dr. Van Slyke and Dr. Marvin described the three-day meeting in January as "the first national conference to bring together physicians, scientists, community service leaders and members of allied professions to formu-

late a program to combat and control the heart diseases."

"The forces of research and therapy, of community service and education are closing ranks against our nation's leading cause of death," they declared. "This conference will provide the guideposts for a comprehensive and concrete program to coordinate the nation's resources in an all-out effort to reduce the toll of disability and death caused by the heart diseases."

In addition to the various medical disciplines, the meeting will include representatives in the fields of nursing, social work, hospital administration, rehabilitation, public health and others concerned with various aspects of the heart disease control problem, the announcement said.

The American Heart Association was organized 25 years ago as a scientific body and was recently reorganized and expanded to become the only national voluntary health agency concerned exclusively with heart and circulatory disease. The National Heart Institute was created by Act of Congress in 1948 as one of the Public Health Service's National Institutes of Health, at Bethesda, Maryland. The Institute, besides conducting its own program of research, supports also both fellowships and research in medical schools, hospitals, and laboratories with funds appropriated by Congress.

CLINICAL CONFERENCE, THE CHICAGO MEDICAL SOCIETY

Attendance at the 1950 Clinical Conference of the Chicago Medical Society should be a must on your schedule. Set aside four days—February 28, March 1, 2, and 3, 1950—for valuable postgraduate observations in the great medical center of Chicago.

There will be clinical sessions and scientific lectures by the nation's foremost medical authorities and educators.

There will be selected scientific and technical exhibits, displays that will dramatize medical developments "up-to-date."

There will be color television of actual surgical procedures, and also black and white telecasts. Observers will see close-up surgical techniques and medical procedures in full color detail.

There will be entertainment. The con-

ference dinner will highlight speakers and entertainers.

Mark your calendar now for February 28,

March 1, 2, and 3, and make your reservation direct to the Palmer House which will be the headquarters for this great 1950 meeting.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

WHAT CAN I DO?

W. A. Dozier, Jr.
Director of Public Relations

From time to time a physician is heard to say, "What can I do to help alleviate the situation? I mean how can I, as an individual, help in the corrections of what I consider faults or inadequacies in our present set-up? I know that there are forces at work which can and will wreck our country, and I know that the attack on the medical profession is just a part of the whole picture. Still I somehow don't see my place in the correction process."

There is no simple answer to such a question. There are many things that each person can do. Some of these things are small and take little time or energy; others are large and require thought and action, time and energy. Each person practices to a certain extent almost all the necessary and possible aids for the situation. But those aids are so basic and encompass so much that practically anyone can find an extension of motivation somewhere along the line. The ideas listed below are all from physicians. At one time or another a doctor has said and implemented his statement with how his idea would help the situation.

Perhaps the idea most frequently expressed is that there is a need of reaffirming the Hippocratic Oath and a rededication to Medical Ethics. This statement does not imply that one is violating either Ethics or the Oath. It is meant to be taken in the light one takes his religion. There is always a need to keep one's beliefs close at hand as a measuring stick of one's actions. That is what these physicians mean when they say we need to rededicate ourselves.

One of the basic necessities of practicing the art of medicine is a strong doctor-patient relationship. Science can do many wonderful things, but the art of medicine necessi-

tates a greater understanding between the patient and the doctor. People are anxious to have a chance to talk to their physicians, and a few extra minutes with a patient allows the growth of this great art of medicine.

Physicians are often criticized because they fail to take part in civic activities. A doctor is a leader and a force in a community, and this position places a great responsibility on him. Society no longer allows a person to do his work and then go home and forget everything. When it is said one must take part in civic activities, the person usually means on a local, county, state, and national level. Usually it is found that a person who is active on the local scene is mentally alert and interested in the situation on up through the hierarchy of our government and social structure.

Your State Association is at present trying to prepare a statement on what the medical profession in Alabama stands for in the fields of medical care and public health. When this statement is made, each physician can get behind it and push it to fruition. The American Medical Association has its program which all of us push, but our own program can and should be something each of us has a part in.

The above ideas do not encompass the whole field of what one can do. They are samples of what one hears from the physicians over the state. If those ideas be looked at, however, it will be seen that the derogatory statements made by some people cannot be leveled at many physicians in our state.

ANNUAL MEETING OF THE ASSOCIATION
THOMAS JEFFERSON HOTEL
BIRMINGHAM
APRIL 20-22, 1950

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

The Goal of the Auxiliary

The Auxiliary to the State Medical Association is eager to establish a branch of its organization in every county that has a medical society sufficiently large to permit. In the case of the small societies, the wives of those composing it may become members-at-large.

We believe we can materially assist in the work of our husbands, and we know we can not give this aid unless we are united in our effort. We must be instructed in medical matters of the day in which the general public is interested before we can be leaders of right thinking in the various social or civic groups with which we are affiliated.

If your argument for not becoming a member of the state organization is "I belong to enough organizations now without taking on something else; the trouble is the whole United States is over-organized," think of another, for this argument is no good. The maintenance of our husbands' profession is being openly challenged by various groups. Looking at it from this standpoint, what other study, civic or social group should rate priority?

To become organized you have but to get the permission of your county medical society to get the ball rolling. When you have this, the members of the state and national Auxiliary will be very happy to make suggestions, forward literature, answer questions or assist in any way possible. Beside the amount of your local dues, which amount you will decide upon, your national and state dues will be \$1.00 each or \$2.00 for the two. A member-at-large pays only national and state dues.

The State Organization Chairman, Mrs. J. G. Daves of Cullman, will be happy to hear from you, and will assist you in every way possible. Don't put off writing her. Do it today.

Membership in the Woman's Auxiliary to the American Medical Association increased over 6,000 in the past year making a total membership of 48,091.

If you are a rural county and organized would only have five members, you are not too small. "We're too small" is no excuse for not forming a county unit. With a rural health program being developed, Auxiliaries are needed in rural counties. May we give you below 10 excellent reasons why every county should have a medical Auxiliary?

1. To establish good fellowship among physicians' families.

2. To fight the socialization of the medical profession.

3. To promote voluntary medical insurance plans.

4. To educate the public, Hygeia circulation can not be improved upon in public relations.

5. To assist with health programs in your community.

6. To further the nurse recruitment program.

7. To study and inform yourselves. (We should know the answers to any and all questions put to us, and without study we can not do this.)

8. To advance or oppose legislation.

9. To work with and as a unified group.

10. To be alert at all times to further the aims of the profession.

May We Ask the County Medical Societies to

1. Evaluate the field of service in which they desire the assistance and cooperation of the Auxiliary in the light of current needs?

2. Appoint *advisors* with vision and insight into the program of the State Medical Association and the Auxiliary's potential part in it—those who are willing to take time to work with the women, and to interpret the Auxiliary's services to the general membership of the county medical society?

May We Request the County Medical Society to

Urge the wives of all members to join the Auxiliary?

Permit the Auxiliary's President to present her program to the county medical society once a year, to answer questions and hear suggestions?

Invite the Auxiliary's Chairmen to sit in at meetings of the public relations and public health legislation committees of the county medical society?

Solicit the interchange of reports about program and policy of both organizations by consultation with officers following each meeting?

Arrange at least one joint meeting a year—social, but with a speaker using a topic of concern to both men and women.

Develop a plan which the women could also follow in training speakers through study groups.

Establish definite rules on publicity. A close liaison between the county society and Woman's Auxiliary on handling and releasing information to the press? The opportunity to report in county medical society bulletins, auxiliary activities, not just social write-ups?

Foster a positive attitude on the part of the individual physician which would help immeasurably in putting across all types of public relations?

Your Woman's Auxiliary volunteers to assist your county medical society in the following activities: 1. health poster contest, 2. circulating petitions, 3. publicizing advantages of medical research, 4. publicizing voluntary health insurance plans, 5. arrange radio programs, 6. sell Hygeia, 7. schedule speaking engagements, 8. plan health programs for lay groups using motion pictures, and 9. organize study groups—speaker training on government medicine and health needs and standards of this country.

West Virginia Leads Off

The following resolution was adopted October 21, 1949 by the West Virginia Congress of Parents and Teachers at the 27th Annual Convention at Huntington:

Accepting the definition of health of the World Health Organization as being a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity, and believing it is our duty and privilege as parents and teachers to accept our community responsibility to work toward achieving this for the people of West Virginia, and believing that the best interest of the public will be served by the people in the local communities working in cooperation with the medical profession to improve our present medical, hospital and nursing facilities,

Be It Resolved, That the West Virginia Congress of Parents and Teachers through its state,

county and local organizations, cooperate with the State Health Department and the West Virginia Rural Health Conference in their efforts to extend and improve health facilities and services in all the areas of the state, and that this Congress go on record as opposed to any form of socialized medicine.

Has the Alabama Congress of Parents and Teachers adopted a similar resolution? Are many other organizations throughout our state doing this? The answer is—they should. Let us make it part of our work to see that they do.

Public Relations

Public relations is literally the relationship of our organization with the public, as individuals and in our organized groups. Each county carries on the type projects suited to its own membership. However, since we can attempt only a given number of projects in any one year, and because the things we do reflect upon the medical profession, you may want to go to your medical society advisors and public relations committee and ask them to evaluate the Auxiliary plans in terms of current need, and the way Auxiliary activities dovetail with the public relations program of the county and state.

Public relations objectives are 1. to carry on cooperative projects with lay organizations which will help to interpret to the public the health needs and problems of modern life, and thus stimulate interest in working for their solution; and 2. to make the medical society and its Auxiliary known within the local community as groups which have health as a major concern, thus adding to the prestige of both, and indirectly making our Auxiliary program seem more important to our members.

Public relations plans are 1. activities for the National Education Campaign by a. securing endorsements, b. distributing literature, c. developing speakers bureaus, and d. planning and executing publicity. (Note: All Auxiliary activity for the National Education Campaign is to be carried on under the supervision of the State Medical Association.) We will give you an outline for the personal education plan, to give every doctor's wife a personal job to do. Discuss this with your medical society before you undertake this project.

2. Long range health education projects. These activities should be based on the A. M. A. 12 point program, to assist in carrying out these points, and to bring this whole program forcibly to the attention of the public: a. nurse recruitment, b. school health services, c. rural health, d. local health units, e. medical research, 3. implementation of the public relations plans: a. planning publicity, press and radio, b. building a file of our members and their contacts with other organizations, and c. developing list of women speakers, both Auxiliary members and lay women available for large public meetings.

Have you heard it said: "It is not the job of the doctor's wife to get in this fight against compulsory health insurance?" If it is not for us to try to alert the public regarding such a vital issue, whose is it? Who cares about the future health of America, if not the doctor and his wife? Who cares if our children are to be "saddled with a scheme whereby those close to the grave fasten themselves on the paychecks of those closer to the cradle and ride piggy-back toward the grave," if not the mothers of this country?

Let us tell the story with a sense of civic responsibility, conscientiously and with discretion, as a community service, to protect our country from the political planners who would turn America into a welfare state from which our children cannot escape. This is not a year for "Social-business-as-usual." It is a year for women to carry the banners, to tell the story. Ask people to decide for themselves. Help them to feel the urgency of the issue, and realize the implications which government medicine has for our form of government.

This is a job which can be effectively done if each of us does her part. It is the most important thing we have been asked to do since our organization. We can do it at home, on vacation, and on into the future until we are sure that this threat to our children's world is overcome. We've got a job to do. Let's do it well.

Hygeia

Hygeia, The Health Magazine, should be used in the schools, and an effort to get it there would be a splendid work for the Auxiliary. Refer again to the 12 facts concern-

ing Hygeia as given you in the October Medical Journal, page 117. Give the superintendent of schools in your vicinity a copy of this, together with a sample copy of Hygeia. Give him further information as to how the magazine may be used in the school.

Mr. Frank V. Cargill has written the following letter, copy of which you can get from him:

Dear Educator:

Thousands of students in high schools, grade schools, normal and nurses training schools now order Hygeia in quantity each month, for use with the Group Study Plan, at a discount of 42%. Here is how the program operates: The instructor or health official places a tentative order direct with this office for 10 or more copies of Hygeia per month. This order can be enlarged and later reduced, or cancelled entirely, provided we are notified by the 1st of the month for the next month's issue. A special rate of 20c a copy (regular price 35c) is offered, with a free desk copy of each issue for the instructor.

Remittance is collected from each student and payment can be made either at one time for the number of copies required per month or on receipt of each month's invoice. Credit is allowed for unused copies—just return the cover heading.

Each month, a set of discussion topic "test" questions, based on the current issue of Hygeia, is mailed without charge. Educators have found a number of ways to use these prepared questions in stimulating classroom activity.

The enclosed 42% discount form gives additional information. Also enclosed is a set of discussion topics, presenting questions based on Hygeia articles.

To place your order simply fill in the discount form and mail in the postage-free business reply envelope furnished. Copies of your beginning issue will be mailed promptly and postpaid. No involved vouchers are necessary when the Group Plan is used—you will receive a simplified invoice monthly, unless you prefer to remit in advance for the period you designate."

Letty Daffin Perdue Loan Scholarship

Congratulations to the original members of the Auxiliary whose years of work and planning have put the Loan half way up the ladder of success. To the new members I hope this explanation will increase your interest in this great work.

The Letty Daffin Perdue Loan Scholarship was established at the annual meeting of the Auxiliary in April 1934 and in memory of Mrs. James Devote Perdue of Mobile, who, as Letty Daffin, graduated with honors at Alabama College, Montevallo. It was said among the students that Letty held so many

offices in her senior year the College passed a new ruling prohibiting a senior holding more than one office. Mrs. Perdue was a former associate librarian at Alabama College. She was a graduate librarian. A highly educated woman of great charm, she was most conscientious in all her club and civic work. Although an active member of the First Baptist Church, American Legion Auxiliary, literary and mystic clubs, she was never too busy to help others with their personal or club problems.

It was no surprise to Mrs. Perdue's friends when Mrs. Seale Harris requested her aid in reorganizing the Auxiliary to the Association and she was elected its President in 1932. Mrs. Perdue died in November of the same year.

After her death a friend of Mrs. Perdue gave fifty dollars so the Auxiliary might begin its Loan immediately. This friend also promised fifty dollars a year to the Scholarship Fund as long as we needed such help.

The Loan was placed on deposit at Alabama College, and the Deans of the various departments, in consultation with the President of the College, awarded the Loan. It was not until 1934 that our first recipient was chosen. The first loan was to a freshman, but, at the request of the President, Dr. Carmichael, succeeding loans were to seniors and, if possible, to a physician's daughter. However, we have had only one daughter on our loan list.

The first recipients repaid their loans, plus interest, a few months after graduating, thus enabling us to place other loans. We have had five loan scholarships at Alabama College. Four of these have been repaid with interest. The fifth recipient only repaid her loan. I feel this is a remarkable record and one the entire Auxiliary should be proud to recognize.

During the war years money was so plentiful there was no need for our loan. As a result, we have on deposit with the Trust Department of the First National Bank of Mobile \$164.83, now available for loans. This deposit is the repayment of the loans plus interest. These repayments have enabled us to maintain our Loan Scholarship plan and at the same time begin accumulating a savings fund toward establishing a trust fund.

The various county Auxiliaries have contributed yearly to the savings fund. These

contributions have been deposited as received. Only check exchange has been deducted in past years.

As a result of the above arrangement and after years of saving and planning, a trust agreement was executed in 1948. This agreement has been executed between the Woman's Auxiliary to the Association and the Trust Department of the First National Bank, Mobile. The monies invested amount to \$1,637.99. This fund has been invested as prescribed by the laws of Alabama for trust funds. The sum of \$25.00 was paid a lawyer for drawing up the trust agreement; this sum having been voted by the Auxiliary at its annual meeting. A small fee for handling the trust fund each year will easily be paid from the interest on the investments. Copies of the Trust Fund are held by the bank, State President of the Auxiliary, State Chairman of the Letty Daffin Perdue Scholarship Fund, and the President of Alabama College. As the county contributions come in they will be turned over to the Trust Department of the First National Bank, and as quickly as possible invested. The money situation is tightening and the authorities at Alabama College tell me they believe they will need our loan this year.

If you, who read this article, know of any girl (regardless of whether or not she is a doctor's daughter) who needs this scholarship, please write Mrs. E. S. Sledge, Mobile, and she will contact the President of Alabama College as the scholarship is available for the 1949-50 term.

I do hope each Auxiliary will continue to support our Loan Scholarship, and that soon the monies collected will have accumulated to a large enough amount that we can increase the amount of our present loan or establish a second scholarship of the same amount.

Escambia County Unit

The Escambia County Auxiliary served as hostess for the fall meeting of the Southwestern Division of the State Medical Association held in Atmore on October 27. Host to the Division was the Escambia County Medical Society, Dr. A. J. Treherne, President. Assisting the Auxiliary, of which Mrs. George T. Perry is president, were wives of doctors and dentists. These ladies served a banquet, and assisted in registering the doc-

tors and their wives. Mrs. William J. Rosser, State President, and Mrs. J. G. Daves, President-Elect were honored guests at the meeting.

The Escambia Auxiliary is to be congratulated on the excellent work it is doing; and we welcome into the state Auxiliary the following new members-at-large which it registered:

Mrs. E. A. Mayo, Repton (Conecuh County).
Mrs. W. A. Stallworth, Frisco City (Monroe).
Mrs. Tom Melton, Georgiana (Butler).
Mrs. A. A. Stabler, Greenville (Butler).
Mrs. M. H. Mason, Greenville (Butler).
Mrs. Philip Gilchrist (name sent to Mobile Auxiliary).
Mrs. H. H. Mintz (name sent to Mobile Auxiliary).
Mrs. Claire T. Bryant, Bay Minette (Baldwin).
Mrs. W. P. Baston, Moundville (Hale).
Mrs. J. C. Godbold, Whatley (Clarke).
Mrs. R. D. Neal, Grove Hill (Clarke).
Mrs. N. Van Wezel, Foley (Baldwin).
Mrs. J. N. McLane, Pensacola (Baldwin).
Mrs. Julius Michaelson, Foley (Baldwin).

It is hoped that these new members will find it convenient to attend the meetings of organized county Auxiliaries nearest to them.

For Investigation

In a journal published by the Woman's Auxiliary to the Indiana State Medical Association called "The Hoosier Doctor's Wife," we note it states the American Medical Association has radio transcriptions available to all Auxiliaries for only the cost of transportation. Many series for twelve or thirteen weeks may be obtained, and these transcriptions cover a wide variety of subjects. They further state in this journal that radio stations will donate time as a public service. For further information write Miss Margaret Wolfe, Executive Secretary to the Woman's Auxiliary to the American Medical Association, 535 N. Dearborn St., Chicago, Illinois.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

HOME CARE OF SICK CHILDREN

Whenever a child—or an older person either, for that matter—contracts a communicable disease, those responsible for his welfare face two problems: (1) getting the sick person well again as soon as possible; (2) protecting other members of the family from the disease.

There has been much advice about the first of these responsibilities, or duties. There has been some about the second. In the opinion of many physicians and public health workers, however, there has not been enough. This article will be devoted to helping meet that lack.

There is no doubt that ignorance has enabled many a case of serious illness to become the starting point for many other cases. A mother who does not take the proper precautions to protect other children against communicable diseases cannot be blamed if she does not know any better. Nevertheless, the fact one or half a dozen

children have contracted such illness purely through ignorance does not affect the seriousness of that illness. It does not bring back a baby that has died. It does not erase the heartbreak that invalidism brings. It does not make up the school work that has been missed. It does not cure youngsters of the permanent damage which illness occasionally causes.

Fortunately, it is not particularly difficult to erect and maintain a fairly strong and dependable wall against infection. No special equipment is usually required. No particular knowledge is called for. All that is needed is to observe a few simple precautions.

When Tommy gets, say, a bad cold and Jimmie gets one a few days later, that means just one thing: Unless that second case was contracted away from home, Jimmie somehow got Tommy's cold virus into his system. He may have breathed it when he took a deep breath about the time Tommy sneezed nearby. He may have taken it into his system when he borrowed a pencil or fountain pen that Tommy had been using. That tiny virus may have crossed that No Man's Land

between the two youngsters on a handkerchief which Tommy had been using and had asked Jimmie to put into the laundry for him. That transfer may have occurred on a knife or fork which was carelessly rinsed after Tommy had used it. It may have occurred in any number of other ways. But the point to remember is that it occurred. Otherwise Jimmie would never have caught Tommy's cold. And the same would have been true, if, instead of having a cold, Tommy had had scarlet fever, typhoid, pneumonia, diphtheria or any one of a number of other communicable diseases.

To protect others, as well as to give the sick person the best chance of a quick recovery, early diagnosis is important. As soon as a child begins to show symptoms, the parents should get busy. That means they should call a doctor. They should be especially on the watchout for such abnormalities as watery eyes, a running nose, sore throat and nausea. Headache should also make them consider the child as at least potentially sick. So should a rash, diarrhea, abdominal pain, aches here and there or stiffness. If any of these abnormalities cause them to take the child's temperature, they should regard any fever revealed as especially significant. Pending the doctor's arrival, they should keep the sick person in bed. They should also keep him away from other children.

Naturally, the doctor's instructions should be followed conscientiously. This applies to his advice aimed at the recovery of the sick child. It applies also to that having to do with the protection of other children and adult members of the family. No doubt he will issue special instructions based upon the peculiar needs of each case. But a few broad recommendations about communicable illness in general may be of help.

The sick child's immediate environment may play a determining role in his recovery and in maintaining that important defensive wall against contagion. So it should be selected with care. It should be flooded with bright sunlight, if possible. It should be well ventilated. It should be somewhat removed from the center of family activities but not so far away as to add materially to the fatigue and trouble of caring for the patient. Since disease organisms have a way of lodg-

ing in odd places, such places should be removed, if possible. Furniture that is not needed should be taken to some other part of the house. Rugs and draperies are notorious germ-catchers. So it is better to get along without them. If bare windows prove depressing, then it is all right to replace the old curtains with some made of washable material. They can be kept clean and fairly germ-free.

The patient should be generously supplied with paper napkins or cleansing tissues. These should be placed immediately after use in a proper receptacle. Naturally, its contents should be burned. A paper bag attached to the bed is often used in hospitals. It is easily reached when the sick person has a napkin or piece of tissue to discard. And the whole package—paper and its contents—is easily burned.

The sick person should be kept away from drafts. If the room is so constructed that the bed must remain in the path of stiff breezes, or if the arrangement of the furniture makes it inadvisable to place it in a more advantageous position, the effects can be minimized. The patient can be protected by a screen. This should be placed between the bed and the open window. If a regular screen is not to be had, something else can be used as a windbreaker. A blanket or sheet will do. It should be hung over two chairs.

Remember that protective isolation does not mean merely keeping other people away from a sick person. Unfortunately, disease germs do not travel from the sick to the well through close physical association alone. Would that they did! They also travel on the dirty feet of flies. They journey far in the bodies of certain mosquitoes. So it is important that all disease-carrying insects be kept out of the sickroom. This can be accomplished by screening. If permanent screens are impracticable, mosquito netting makes a fairly satisfactory substitute. Doors should not be left open any longer than necessary to get in and out. Naturally, these precautions are more important in warm weather, when the fly and mosquito problem is more serious, than in winter.

Sweeping, as the term is generally understood, has no place in the well-run sickroom. If possible, a vacuum cleaner should be used.

A mop containing a small amount of oil will also serve satisfactorily. If neither of these is to be had, some form of sweeping may be the last resort. In such cases, wet sawdust should first be sprinkled on the floor. If that too is unavailable, then newspapers should be dampened, torn into small bits and scattered about. Either of these methods helps to keep down dust, which may contain germs.

One of the first decisions that need to be made when someone develops a communicable disease concerns the attendant. Who shall assume responsibility for waiting upon the patient? Usually it devolves upon the mother, for reasons easily understood. But whoever is chosen should do all that needs to be done, except for what the doctor must do of course. No one else except the doctor should be allowed inside. No one else should handle anything the patient handles until after it has been washed and scalded or sterilized. After handling such articles before they have been germ-freed, that single designated person should wash her own hands thoroughly. That should also be done whenever she goes into another part of the house.

It would be impracticable for the attendant to wear entirely separate garments inside and outside the sickroom. Nor, fortunately, is that necessary. She should, however, have some kind of dress or jacket handy to put on as she enters the sickroom. This should be of washable material and changed frequently. It may be well to wear a mask as well, especially if the attendant has not developed natural or acquired immunity to the disease.

Some types of illness call for special diets. These of course are prescribed by the doctors. It goes without saying that an effort should be made to give a patient what the physician thinks he ought to have. This is true, even when the physician recommends foods that are expensive or hard to get. In illness, remember, food is medicine. It is sufficiently important in the treatment to justify whatever financial sacrifice or trouble it may impose upon the family.

Fortunately, most sick people get along all right on simple, inexpensive and plentiful foods. The important thing, then, is to provide what especially appeals to them so

as to make them eat enough to build up their strength. Serving it attractively is a great help to that end. The appetite is a sensitive thing when one is sick, and care in preparing a tray pays off. Gay colors stimulate the desire to eat. This applies to the tray, the dishes and napkins. Messiness should be avoided. If food is spilled out of its containers on its way from the kitchen to the sickroom, the attendant should retrace her steps and clean up the tray. Dishes should not be allowed to slosh over.

The tray should be removed as soon as possible after the patient has finished eating. However attractive it may have been when brought, it is unpleasant to look at it when it contains soiled plates, food-littered silverware and dreary dishes of cold gravy, rigid mashed potatoes and clammy meat and vegetables. Such trays may be even worse than unattractive: They may be actually repulsive.

For reasons that should be obvious, no food from a sick person's tray should be eaten by anyone else. Such food should be burned at once.

Chinaware and silverware used by the patient should be used by no one else. As an added precaution, they should be kept in boiling water for at least five minutes. Then they should be scrubbed thoroughly. The water used for this purpose should be soapy. Then of course they should be rinsed.

It is unfair to the general public to send bed clothing, pajamas, etc. to a public laundry without first doing something to protect them against the patient's germs. Such articles should be placed in a suitable receptacle immediately after being discarded. The receptacle should contain soapy boiling water. The water should be kept at a boil for at least a quarter of an hour after the articles have been placed in it.

After a case of communicable disease has ended, the sickroom should be freed of any germs that might make its use by others unsafe. All windows should be opened as wide as possible and left like that for at least a day. Then the room will receive a healing bath of fresh air and sunshine. Except in unusual cases, it is not necessary to fumigate in the way rooms used to be—with strong chemicals. It is advisable, however, to do a thorough cleaning job on bedsteads,

tables, windows, woodwork, etc. Soap and hot water should be used generously. It is well to include the floor too in this cleaning operation. Clothing which cannot well be boiled should be exposed to air and sun for a day or two. So should mattresses. Books and other personal articles which the patient has used should be left out in the open for a day or longer. Then they should not be used for several days more, to be safe.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

OCTOBER 1949

Examinations for diphtheria bacilli and Vincent's	525
Agglutination tests (typhoid, Brill's and undulant fever)	1,079
Typhoid cultures (blood, feces and urine)	373
Examinations for malaria	372
Examinations for intestinal parasites	4,255
Serologic tests for syphilis (blood and spinal fluid)	26,513
Darkfield examinations	11
Examinations for gonococci	2,247
Examinations for tubercle bacilli	2,991
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	88
Water examinations	1,407
Milk and dairy products examinations	4,703
Miscellaneous	226
Total	44,790

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	Sept.	Oct.	E. E.* Oct.
Typhoid	6	3	8
Typhus	7	22	32
Malaria	18	17	322
Smallpox	0	0	0
Measles	15	10	13
Scarlet fever	39	87	115
Whooping cough	27	33	61
Diphtheria	42	62	144
Influenza	30	69	78
Mumps	17	19	25
Poliomyelitis	50	32	10
Encephalitis	0	1	1
Chickenpox	2	15	13
Tetanus	8	3	3
Tuberculosis	232	206	222
Pellagra	2	3	4
Meningitis	3	6	6
Pneumonia	75	108	115
Syphilis	550	643	1507
Chancroid	15	27	19
Gonorrhea	483	566	599
Tularemia	1	1	0
Undulant fever	8	8	7
Amebic dysentery	1	3	1
Cancer	359	393	190
Rabies—Human cases	0	0	0
Positive animal heads	27	23	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR AUGUST 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During August 1949			August Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	7689	**	**	29.5	26.3	27.5
Total stillbirths	216	**	**	27.3	26.0	31.5
Deaths (stillbirths excluded)	2127	1228	899	8.2	7.2	8.0
Infant deaths:						
under one year	313	166	147	40.7	34.3	32.8
under one month	227	116	111	29.5	29.0	25.5
Cause of Death						
Tuberculosis, 001-019	71	25	46	27.2	30.3	33.8
Syphilis, 020-029	13	3	10	5.0	10.0	7.0
Typhoid and paratyphoid, 040, 041						0.8
Dysentery, 045-048	9	7	2	3.4	***	***
Diphtheria, 055	3	1	2	1.2		0.4
Whooping cough, 056	1		1	0.4	0.4	3.5
Meningococcal infections, 057					0.4	0.4
Poliomyelitis, 080, 081	2	2		0.8	0.4	
Encephalitis, 082, 083						0.4
Measles, 085	3	1	2	1.2		
Typhus fever, 100-108					0.8	0.8
Malaria, 110-117	3	2	1	1.2	0.8	1.9
Malignant neoplasms, 140-200, 202, 203†	205	142	63	78.7	77.1	79.6
Diabetes mellitus, 260	16	7	9	6.1	11.1	14.0
Pellagra, 281	3	2	1	1.2	1.9	2.3
Vascular lesions of central nervous system, 330-334	194	108	86	74.5	72.5	75.7
Other diseases of nervous system, 300-318, 340-398	43	24	19	16.5	8.8	***
Rheumatic fever, 400-402	3	3		1.2		***
Diseases of the heart, 410-443	629	381	248	241.4	153.5	189.0
Diseases of the arteries, 450-456	23	20	3	8.8	6.5	10.1
Other diseases of circulatory system, 444-447, 460-468	30	14	16	11.5	3.4	***
Influenza, 480-483	5	1	4	1.9	0.8	2.3
Pneumonia, 490-493	52	24	28	20.0	21.9	22.5
Bronchitis, 500-502	1		1	0.4	1.9	1.9
Appendicitis, 550-553	10	3	7	3.8	1.9	3.9
Intestinal obstruction and hernia, 560, 561, 570	21	13	8	8.1	3.1	7.8
Gastro-enteritis and colitis (under 2)						
571.0, 764	38	25	13	14.6	8.4	5.8
Cirrhosis of liver, 581	14	10	4	5.4	3.8	2.3
Diseases of pregnancy and childbirth, 640-689	13	5	8	16.4	22.7	24.6
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	3	1	2	3.8	5.8	8.2
Congenital malformations, 750-759	30	19	11	3.9	4.5	***
Accidental deaths, total, 800-962	155	107	48	59.5	60.6	66.4
Motor vehicle accidents, 810-835, 960	62	52	10	23.8	26.9	12.4
All other defined causes	435	254	181	167.0	171.6	209.2
Ill-defined and unknown causes, 780-793, 795	102	25	77	39.2	53.4	47.0

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the August report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204), and mycosis fungoides (205).

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

THE SIGNIFICANCE OF THERMODURICS IN MILK

Contributed by

U. D. Franklin, B. S., M. S.
Chief Sanitarian

Many years ago Antonj van Leeuwenhoek, by means of a microscope, saw life in many common foods and liquids. Spoilage was common but the reason for it was not generally known. This life, we now know and can readily determine, is a minute plant or animal called in the singular, a bacterium and in the plural bacteria. Bacteria may be grouped under three general or common classes, viz:

1. Harmful or disease producing.
2. Beneficial, or helpful.
3. Nuisance, or pest.

For bacterial development there is obviously a need of food, moisture, and warmth. Fluid milk offers an ideal medium for the growth and development of most bacteria. In most of them, however, temperature is the controlling factor which determines whether or not growth will take place. The activities of bacteria are greatly influenced by varied temperatures. Therefore, it must be kept in mind, when thinking of the relation of temperature to microbic life, that two factors are operating—the temperature and the time of exposure to that temperature. All living cells respond to temperatures in various ways. Bacteria, being living cells, are no exception. Their metabolism, physical appearance or morphology may be altered greatly. Their growth may be stimulated or retarded depending upon the particular combination of temperature and time of exposure. All bacteria have a temperature range throughout which the organisms may grow. Within this range, however, there is a minimum temperature below which growth ceases, an optimum temperature which is most favorable for rapid growth and a maximum growth temperature above which growth ceases. On the basis of their growth in relation to temperature, bacteria are classified under the following terms: mesophilic (moderate loving), thermophilic (heat loving), thermoduric (heat enduring), and cryophilic (cold loving). Much effort is expended by the

market milk industry to keep the bacterial content of pasteurized milk to a minimum. One particular group of bacteria is especially troublesome in that regard. The organisms involved and which survive pasteurization in considerable numbers are classified as thermodurics.

In instances where thermoduric bacteria are responsible for high counts in pasteurized milk, it is the thermoduric mesophiles which often predominate. The major factor in high bacterial counts in pasteurized milk is the presence of excessive numbers of thermoduric types in the raw milk delivered from the farm. The presence of thermoduric bacteria in milk has little or no public health significance except that their detection in large numbers would indicate a lack of sanitation at the source of production. Of course, faulty plant sanitation or ineffective pasteurization within the plant itself are other factors that may cause high counts and actually result in an unsafe product from the standpoint of health.

Laboratory pasteurization of individual producer samples has been used extensively to segregate shippers delivering milk containing excessive numbers of thermodurics. Such information permits efficient utilization of field service in eliminating the source of trouble on the dairy farms involved.

Since many of these bacteria grow readily at 68° to 104° F., improperly cleaned and sanitized cans, milking machines, and other utensils are responsible for most of the contamination. In many instances the original source of thermodurics is the udder of the cow.

Even though they exist in small numbers in the udders of healthy animals, nevertheless the absence of good housekeeping with regard to the cleaning of equipment and methods of operation are the contributing factors responsible for most major contaminations.

Tuberculin tests are an essential part of preventive services to children, both to indicate whether infection has occurred and to direct attention to sources of infection. The increasing interest in BCG vaccine may lead before long to its wide use in minimizing the probability of the development of clinical tuberculosis.—Henry E. Meleney, M. D., *The Milbank Memorial Fund Quarterly*, July 1949.

BOOK ABSTRACTS AND REVIEWS

Psychosomatic Medicine. By Edward Weiss, M. D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia, and O. Spurgeon English, M. D., Professor of Psychiatry, Temple University Medical School, Philadelphia. Second edition. Cloth. Price, \$9.50. Pp. 803. Philadelphia and London: W. B. Saunders Company, 1949.

In the arid waste between general medicine and psychiatry, there has arisen a verdant literature reflecting the resurgence of the psychosomatic approach in the consideration of disease. In the heat and excitement of the laboratory phase of medical development, the patient deteriorated into a growing medium for bacteria, a flash for physio-chemical reaction, or a workbench for the application of a host of ingenious engineering and plumbing principles, while the physician was threatened with the role of dignified laboratory hack, all too frequently a picture of perplexed despair, when so many of his patients failed to succumb to the wiles of the tablet, shot and scalpel.

The patient is now escaping the oppression of the mechanistic dualism of psyche and soma. He is no longer declasse. He is being dignified by a proper respect for his thinking and feeling, particularly for the manner in which the latter cause or influence the illnesses that beset him. This collaborated effort of internist and psychiatrist is one of the better of such books from which many physicians may seek to repair the defects of inadequate psychiatric orientation in their training.

This second edition, with its additions and rearrangement of chapters, makes for more comfortable reading and more convenient reference. The book is now divided into two sections. The first, and the better one, concerns itself with general considerations of the subject. The authors present succinctly and convincingly the major thesis that "all illness is a problem of disturbance of psyche and soma, hence all medicine is psychosomatic medicine." The psychology is dynamic, flexibly Freudian without ever becoming supersonic or stratospheric.

The chapter on psychopathology presents a well ventilated and refreshing brand of psychiatry, free of the oppressive backhall odors of institutional deterioration and dementia, so characteristic of most psychiatry texts. These chapters on treatment never stray from the comfortable familiarity of the physician's office, or the patient's bedside. Redundancy of details is scrupulously avoided, since the authors are more intent on providing a healthy psychiatric orientation than in producing the polished psychotherapist.

Part two devotes itself to the appraisal of the psychosomatic disorders of the various organ systems. Seventy-nine lengthy case reports are presented, and the descriptive formulations reviewing the dynamics in each reflect what must

now be considered a catholicity of psychiatric thought. Tables of general and special references are provided and Levine's excellent "Orientation Chart for Teaching Psychosomatic Medicine" is appended.

Psychosomatic medicine is not a specialty. It is a pattern of medical thought as vital to the practice and progress of medicine as was, and is, asepsis to surgery. It is, however, no longer an intuitive clinical sense but a scientifically based attitude which must be developed. This book admirably provides the essential material for the beginning of such a project.

Philip S. Bazar, M. D.

Fundamentals of Otolaryngology. By Lawrence R. Boies, M. D., Clinical Professor of Otolaryngology, University of Minnesota Medical School, Minneapolis, and Associates. Cloth. Price, \$6.50. Pp. 443, with 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1949.

Fundamentals of Otolaryngology is an elementary text of modern otolaryngology primarily for the instruction of undergraduate medical students. It is not intended as a complete reference although it has an excellent bibliography of present day literature.

The print and paper are better than average. The illustrations are good but in places oversimplified even for a student. The style of writing is excellent and is not marred by the fact that there are several co-authors. The treatment is up-to-date, conservative, and presents a fair discussion of controversial issues.

While it presents many good points from which any otolaryngologist might profit and is excellent as a textbook, it is too elementary to be recommended for the reference library of the average practitioner or specialist.

Paul S. Mertins, Jr., M. D.

A Textbook of Neuropathology. By Ben W. Lichtenstein, B. S., M. S., M. D., Associate Professor of Neurology, University of Illinois College of Medicine; State Neuropathologist, Illinois Neuropsychiatric Institute; Attending Neurologist, Cook County Hospital; Professor of Neurology, The Cook County Graduate School of Medicine; Attending Neuropsychiatrist, Mount Sinai Hospital, Chicago. Cloth. Price, \$9.50. Pp. 474. Philadelphia and London: W. B. Saunders Company, 1949.

This book has been written for "The medical student and for those training in Neurology, Psychiatry, Pathology and Neurological Surgery." It is a thoroughly winnowed text, as neat and uncluttered as any student could desire. The first three chapters are largely introductory. The author defines neuropathology, setting its limits.

He rails, with justice, at the use of the eponym and pleads for a more informative and descriptive terminology. The second chapter with the supplement in the final chapter covers neuro-pathological methodology with thoroughness and dispatch. The third chapter is devoted to a consideration of pathogenesis. The text continues to examine and describe the various pathological involvements of the nervous system under the standard pathological heads of degeneration, inflammation, neoplasms, malformations and deformities, vascular and muscular disorders. The student will be gratified to find at the close of each chapter that the material stands out with etched definition and scrubbed clarity. He keeps the reader in constant, if fleeting, touch with the clinical picture. Each disorder is treated as definitively as the author's scientific honesty permits, and wherever equivocation is necessary the reader is mercifully spared the academic harangue.

With proper consideration for and concern with the needs of the student, the author appends in the last three chapters valuable supplements, which tend to round out the adequacy of the book

as a text. Chapter XV lists in number and alphabetical sequence, with short explanatory notes, a variety of syndromes, paralyses and uncommon diseases which do not merit more thorough treatment in a book which makes no pretensions to being exhaustive. Chapter XVI is a neuro-anatomical supplement providing too little anatomy and histology to eliminate for the student the need for reference to books devoted to these subjects,—which is hardly a criticism of a textbook on neuropathology. As a refresher, however, it serves very well. The final chapter is devoted to stains and staining technique, and is certainly clear and comprehensive.

The references are recent and authoritative. The format is attractive and the publishers are as deserving of commendation for the clarity of reproduction of the many photographs and microphotographs as is the author for his recognition of the value to the student of profuse illustration, for which no amount of textual prolixity is an instructive substitute. This is a workmanlike job and is highly recommended.

Philip S. Bazar, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

CALIFORNIA PSYCHIATRISTS TELL HOW TO RELIEVE WORRY

Two psychiatrists of the University of California Medical School have been studying worry, "taking the emotion apart," to see what happens when people become anxious and how anxiety can be relieved.

Reporting in the November issue of Archives of Neurology and Psychiatry, published by the American Medical Association, Drs. Jurgen Ruesch and A. Rodney Prestwood of San Francisco give their conclusions.

When a person's body is stimulated to prepare for action, an unusual condition of blood vessels, muscles, and other parts occurs, the doctors say. As the body is persistently stimulated to prepare for action which cannot be made, the resulting effects are felt by the person as anxiety and tension.

Anxiety is contagious, the doctors found. No matter how much the worriers try to suppress and conceal their emotion, other people become infected from small indications, such as tone of voice and gestures, and start worrying, too.

Some people try to compensate for anxiety by overindulgence in eating, smoking, or drinking, the study shows. Others try to

suppress their worry by making an effort to conceal it. Others try to establish a feeling of "belonging" by social contacts, ranging from conversation about the weather to group activities, such as those of clubs.

Still others react by attempting to control the actions of friends and acquaintances, to dictate to them.

None of these are mature or effective reactions, the psychiatrists found.

Successful management of anxiety generated in daily life seems possible only through discussing and sharing the problem or situation with other persons, the psychiatrists say.

"The successful management of anxiety generated in daily life seems possible only through the process of sharing and communication," the article points out.

"The process of communication is essential for healthy functioning so that people may combine efforts to cooperate, complement, and increase their ability to cope with surroundings.

"Alleviation of anxiety through personal contact is the process which is basic to all interpersonal relations from babyhood to old age.

"The ability to communicate and hence to share anxiety seems to constitute that process responsible for feelings of personal security of the individual."

The study was supported by a grant from the U. S. Public Health Service, Division of Mental Hygiene.

LOSS OF MOTHER MAY BE FACTOR PRODUCING MENTAL ILLNESS

Loss of mothers at an early age may contribute to a later development of mental illnesses, a Harvard Medical School doctor has found.

In a group of 1,683 patients with severe mental illness, an unusually large number while young had been separated from their mothers by death or other causes, Dr. Herbert Barry, Jr., of Boston reports.

Dr. Barry describes his study in a recent issue of Archives of Neurology and Psychiatry, published by the American Medical Association.

Eight years seems to be the "critical age" below which separation from mothers appears more serious as a predisposing element for both severe mental illness and neurotic conditions, he says.

"In recent discussion of psychiatric conditions, there has been an increasing tendency to accept multiple factors as playing a possible role in the causation of mental illness," Dr. Barry points out.

"There are indicated several periods which may assume special significance. Prior to birth many elements may influence the developing organism, such as infections, which may result in blindness or other malformations.

"Second, after birth and before the appearance of mental illness there is usually a period of at least 15 years. The patient who later becomes mentally ill may often be subjected to numerous traumatic situations during this interval.

"It has been difficult to determine whether these events actually play a part in the causation of psychiatric illness, because of the long period which may elapse between the time of trauma and the actual onset of a psychosis later.

"A third, and final, period of importance in the life history of psychotic patients is the

period immediately prior to the onset of symptoms. Events which occur at this time may be said to precipitate the illness.

"A study of parental deaths from this point of view is now in preparation."

STUDY SHOWS SAFETY OF COLD WAVING PREPARATION

Judicious use of ammonium thioglycolate as a hair-waving preparation should prove a relatively innocuous procedure, according to a study made by Dr. A. J. Lehman, Washington, D. C., chief of the Division of Pharmacology, U. S. Food and Drug Administration.

The study appears as a report to the American Medical Association's Committee on Cosmetics in the November 19 Journal of the American Medical Association.

Thioglycolic acid in the form of various salts is the active ingredient of 75 per cent or more of the cold-waving lotions now in current use, Dr. Lehman points out.

"The number of cold waves given each year employing salts of thioglycolic acid can no doubt be estimated in the millions.

"The number of complaints in comparison with the total number of applications is small. From rigorous laboratory evaluation of the hazards involved, it may be stated that the judicious use of ammonium thioglycolate as a hair-waving preparation should prove a relatively innocuous procedure.

"The majority of complaints from patrons and operators probably are due to the misuse of the product because of failure to heed directions or precautions. Allergic responses to the thioglycolate appear to have occurred only rarely.

"Allowance must also be made for allergic responses to the other ingredients, such as wetting agents and perfumes.

"It is believed that protection for the hands is essential in the case of operators or persons who have occasion to be exposed daily to varying amounts of the waving solution.

"Experimental evidence on alkaline solutions of ammonium hydrogen sulfide indicates that such preparations are so extremely hazardous as to preclude their use in hair waving agents."

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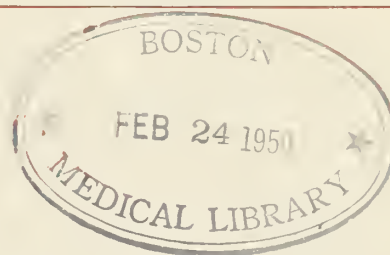
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*Ault, G. W. & Madigan, E. P.: Am. J. Surg., 77:352, 1949.

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THE MORE COMMON RECTAL CONDITIONS

W. J. ROSSER, M. D.

Birmingham, Alabama

The anorectal region is an important part of the human anatomy. Many disease conditions occur here that not only serve to make life miserable and cause the loss of many working days but the region is also the frequent site of malignancy. This part of the body has often been sadly neglected and has sometimes been completely overlooked during a physical examination that may have been thorough in other respects. No physical examination is complete without a proctologic examination.

No disease can be treated until it has been correctly diagnosed, and it seems proper to say that correct diagnosis is at least 50 per cent of treatment. Correct diagnosis of diseases of the anus and rectum cannot be made unless the parts are actually visualized through an anoscope and proctoscope. X-rays are of little value in diagnosis here but are indispensable where the colon is concerned.

Lesions of the anal canal usually produce pain and discomfort out of all proportion to the size of the lesion, while those of the rectum proper may progress to unbelievable size without producing symptoms sufficient to cause one to seek the advice of a physician. So that, if the rectum is neglected during a routine physical checkup, early malignancy may not be found where early diagnosis is so important if cure is expected.

Read before the Association in annual session, Montgomery, April 19, 1949.

Most people seek the advice of their physician on account of either pain or physical discomfort on the one hand, or deviation of body functions from the normal with resulting anxiety, foreboding or fear on the other. This is especially true of the rectal region.

Disease conditions of the anal canal and surrounding structures account for the greatest discomfort. There may be the sharp shooting or tearing pain of anal fissure or ulcer; the aching or throbbing of rectal abscess; the aching or feeling of fullness of hemorrhoids, or the severe itching and burning of pruritis ani.

Deviation from the normal may be noted as change in bowel habits; blood in the stools; change in the character and consistency of the stools; protrusion from the rectum with or without physical discomfort; or perhaps a slight but persistent discharge from the rectum.

Any of these symptoms makes a thorough search of the anal canal, rectum and colon mandatory. In addition, the patient may be found to be losing weight, to be nervous, sleepless, easily fatigued, or anemic. A thorough examination of the rectum and colon should be done in an attempt to find the cause.

ANAL FISTULA

An anal or rectal fistula is a fistulous tract, usually arising in one of the anal crypts and ending externally in the perianal region. But, it may end in some surrounding viscus,

as the vagina or bladder, or higher up in the rectum. In rare cases a fistula may be the result of trauma, with perforation of the rectal wall, in which case the internal opening is not necessarily in an anal crypt. Some fistulas accompanying lymphopathia or tuberculosis of this region have their internal openings elsewhere than in the crypts. But the common site of the internal opening is in one of the anal crypts.

Anal fistulas are preceded by, and are the result of, perianal or perirectal abscesses. These abscesses have their beginning in an anal crypt. An infectious process begins here and extends into the small glandular tissue, of which the crypt is the opening into the anal canal. This crypt becomes closed by the inflammatory process, and the infection extends into the soft perianal areolar tissue and the burrowing process begins. It may go external to the sphincter muscle and form a superficial abscess, or it may burrow through or above the sphincter and through the levator ani muscle and form a deep or supralelevator abscess. If the latter occurs and the abscess is not opened surgically and drained early, the abscess may rupture into the rectum above, the vagina, bladder, or any neighboring viscus and complicate the fistula.

But, whether any of these abscesses rupture spontaneously or are opened and drained surgically, almost invariably a fistulous tract is left. It is always advisable to open and drain them surgically. In this way, the external opening can be made at the most desirable point. This should be over the center of the abscess one or two inches from the anal margin. If the abscess is deep, closed Kelly forceps are inserted into the incision and, with the index finger in the rectum as a guide, the forceps are forced through the levator muscle and opened, allowing the pus to escape. Where very extensive abscesses are present, multiple openings are made, the edges of the wounds trimmed off to prevent too early closure, and rubber tissue drains inserted. A large dressing is applied. Dressings and drains are removed in twenty-four hours and hot Sitz baths begun. In two to three weeks the remaining fistula is operated on.

The burrowing process mentioned above may extend around the rectum from one

side to the other and rupture on both sides of the anus and form a horseshoe fistula. In neglected cases multiple openings may occur on the buttocks and down the thigh. There is usually only one internal opening in these or any other cases. It has been stated that about 80 per cent of internal openings are in a posterior crypt.

Diagnosis of anal fistula is usually made by finding an opening or several openings in the perianal region, perhaps also on the buttocks, on one or both thighs, and a history of abscess sometime in the past, or several abscesses over a period of years. Usually only one internal opening is present. The tracts are often tortuous and difficult to trace to their internal opening. However, a fibrous band can generally be felt extending from an external opening toward the internal opening. If the internal opening is not easily found, probing of the crypts should be postponed until it can be done under anesthesia.

Any treatment of anal fistula other than surgical treatment is usually temporary or palliative and should be reserved only for those cases in which the physical condition of the patient is such as to contraindicate surgery.

If success in the cure of fistulas is expected, the internal and the external opening or openings must be connected and the tract opened, together with all tissues external to it. The edges are then trimmed away, transforming the tract into a V-shaped ditch. This may necessitate dividing the sphincter muscle and will if the tract goes above it. This can be done safely if enough time has elapsed since the primary abscess for scar tissue to form and prevent too much retraction of the cut ends of the muscle. The placing of packs between the cut ends of the sphincter muscle should be avoided. A small piece of rubber dam is sufficient. This and other dressings are removed in twenty-four hours. This should prevent any incontinence. Packing the ends of the divided muscle apart causes the formation of a plug of fibrous tissue between the ends, tending to produce incontinence.

It is only by experience with fistulectomies that one comes to know when to do them in stages and when to do them as a one-stage operation. Most of them can be done successfully in one stage. However, in

doubtful cases, where the sphincter is to be cut, success is assured by incising all the tissues down to the sphincter and loosely tying a large piece of suture silk around the sphincter. About two weeks later, after scar tissue has formed, the muscle is cut. If more than one fistulous tract is present, this method is followed out in each case, using a different stage for each tract.

HEMORRHOIDS

Hemorrhoids are dilated hemorrhoidal veins and are similar to varicose veins occurring elsewhere in the body. Pathologically they present a number of dilated venous cavities making up the hemorrhoidal plexus.

As to etiology, Tuttle states that there is scarcely a condition or disease that has not at one time or other been said to produce them. The main etiologic factors may be briefly summed up as follows:

1. The upright position of the body in man and the absence of valves in the superior hemorrhoidal vein, and the long column of blood from the anus to the liver.
2. The age of the person, occurring more frequently in the third, fourth and fifth decades of life.
3. Heredity, since successive generations frequently suffer from this condition.
4. Occupation, occurring more frequently in persons who lead a sedentary life.
5. The taking of drastic cathartics.
6. Chronic constipation and straining at stools.
7. Overindulgence in alcoholic drinks.
8. And last, but not least, chronic infection of the anal crypts.

Hemorrhoids may be classified into two groups, external and internal. The external variety may be simple or complicated, depending on whether they are thrombosed, ruptured or inflamed. The internal variety may be simple, first, second or third degree, depending on the degree of protrusion present. They may be complicated, depending on whether they are thrombosed, strangulated, irreducible, gangrenous or inflamed. The external and internal varieties may be combined and are called externo-internal.

The most common symptoms of hemorrhoids are bleeding, protrusion and pain, or a feeling of fullness and discomfort. No diagnosis of hemorrhoids should ever be made solely on the symptom of bleeding. A thorough proctologic examination should be done. Less common symptoms are nervousness, backache, neuritis, menstrual dis-

orders, and digestive and urinary disturbances.

It should be remembered that protruding internal hemorrhoids are covered by mucous membrane and external thrombotic hemorrhoids are covered by skin.

The treatment of hemorrhoids may be divided into palliative and surgical. Palliative treatment includes such measures as hot Sitz baths, promoting soft stools through such means as giving mineral oil, or metamucil, and feeding a low residue or low roughage diet, with possible rest in bed while reducing any protrusions present.

Some authorities would also place the injection treatment of hemorrhoids under the category of palliative treatment. Others would place this treatment under the category of surgical and curative. It is our practice to reserve injection for elderly people and for those whose physical condition contraindicates surgery. We also employ it sometimes to check bleeding and in small single non-protruding hemorrhoids. In our hands very little benefit has been derived from injecting protruding hemorrhoids.

Various operations have been devised for the removal of hemorrhoids, including the clamp and cautery, the Whitehead, the excision and suture and the ligation with excision. The method employed by us is as follows:

The patient is admitted to the hospital the afternoon before operation. Routine laboratory work is done. A barbiturate is given at bedtime and again two hours before operation. A plain warm water enema is given two to three hours before operation and a third grain of Pantopon and one two hundredth scopolamine thirty minutes before operation. The patient is usually not shaved since shaving increases postoperative discomfort, especially when the hairs begin to grow back. One of three anesthetics is preferred. They are: 1. low spinal, 2. caudal, or 3. sodium pentothal. Spinal anesthesia, using 5 mg. Pontocaine, is the simplest and easiest to give. No sequelae other than an occasional mild postoperative headache have been noted in over two hundred consecutive cases. Caudal anesthesia gives very satisfactory relaxation but is more bunglesome and requires longer time. Sodium pentothal is very good where the patient has a tendency to be nervous and insists on being put

to sleep. The anesthetist should be especially experienced in its administration.

The patient is placed in the prone position with the hips elevated for better exposure. The perianal region is prepared with an antiseptic, such as Tincture of Merthiolate, and the patient draped. Ten cc. of an anesthetic in oil, such as Zylcaine, is injected perianally. The anal canal is thoroughly inspected through a large anoscope and the hemorrhoidal masses and other pathology located. Four Pennington clamps are placed on the right and left, anterior and posterior, anal margins and moderate traction applied for better exposure. The first hemorrhoid to be removed is now exposed with a Hirshmann retractor which is a right angled retractor curved to fit in the anal canal. The hemorrhoidal mass is now grasped with a Kelly clamp, care being taken to see that there is not too much tissue in the grasp of the clamp and that there are no folds of mucosa. This mass is now double ligated above the clamp high enough to include all the hemorrhoidal tissue. The hemorrhoidal mass is then removed with small curved scissors well out on to the skin surface and including any external hemorrhoids or skin tabs. The stump is then anchored by three or four sutures taken with the same suture used for ligation. Irregular edges are trimmed off and bleeding controlled with double naught plain catgut or electrocoagulation. This procedure is repeated for other hemorrhoidal masses present. Two or three rubber tissue drains are now inserted in the anal canal or a strip of Oxycel placed in each wound and a light dressing applied.

All dressings are removed in twenty-four hours and hot Sitz baths begun three times a day. The patient is given liquids the first day and then put on a low residue diet. After four or five days in the hospital the patient is seen in the office every three to five days, the finger being inserted at each visit, until all wounds are healed.

PRURITIS ANI

Itching around the anal outlet, perineum and vulva, and scrotum is a very common symptom which may accompany almost any of the diseases of this region. It may be only part of a general constitutional disease such as diabetes or allergy, and if the condition is cleared up the itching disappears.

The most important thing to remember is that a large portion of perianal itching is caused by some local disease condition. Anal fistula, hypertrophied anal papillae, anal fissures and ulcers, anal polyps and protruding internal hemorrhoids may all cause more or less irritating discharge and perianal itching. When these conditions are properly treated, the itching disappears.

Chronic infection of the anal crypts and surrounding tissues occurs more frequently than is usually recognized. This condition has usually existed for years, with the gradual formation of scar tissue and moderate to marked atresia of the anal canal. These people are usually constipated and the anal mucosa has become torn, especially in the posterior midline, healing has not taken place, and there is a resulting deep fissure, sometimes exposing the sphincter muscle. The anal papillae are usually involved and more or less hypertrophied, sometimes protruding with each bowel movement. Often there is moderate to severe perianal itching. Accompanying all this there is some bleeding on bowel movement and a varying amount of pain and discomfort. These conditions sometimes are not found on physical examination and the nervous manifestations resulting from them may be quite marked. Surgical correction of this condition is indicated and the results are usually very satisfactory.

SUMMARY

The importance of the anorectal region has been stressed and some of the symptoms encountered in diseases of this region enumerated. Only a few of the disease conditions have been discussed and their treatment briefly outlined.

Aureomycin in Shingles—Four cases in which aureomycin produced quick relief from shingles are reported by two Newport News, Va., doctors in a recent issue of *The Journal of the American Medical Association*.

All four patients experienced relief of pain 24 hours after the antibiotic drug was administered, say Drs. M. L. Binder and L. E. Stubbs.

In two cases, the rash associated with the disease disappeared in five days. In the remaining two cases, the rash disappeared in four and seven days, respectively.

"The treatment of herpes zoster at its best has been unsatisfactory in the past," the doctors point out. "The multitude of therapeutic agents recommended is an indication of the lack of efficacy of any one of these agents in the majority of cases."

FATAL GRANULOCYTOPENIA FOLLOWING
HYDANTOINS—MESANTOIN AND
DILANTIN

REPORT OF CASE

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The toxic effect of drugs used for therapeutic purposes is of utmost importance to all physicians; and physicians in general are usually alert to the common untoward reactions which may occur. The modern drug armamentarium has brought into sharper focus a very important organ system which may be profoundly affected in a deleterious manner. This is the hematopoietic system. Briefly, the hematopoietic system includes:

1. The bone marrow, which is the site of formation of the neutrophilic, basophilic, and eosinophilic leukocytes, red cells, and platelets.

2. The spleen, which is the site of formation of monocytes and lymphocytes. It can act as an extra-medullary hematopoietic center on demand, and has other functions related to the hematopoietic system.

3. The stomach, which is the site of formation of erythrocyte-maturing factor, and has other functions related to the hematopoietic system.

4. The lymph nodes, which are the site of formation of lymphocytes.

5. The liver, which produces fibrinogen and prothrombin, and which stores erythrocyte-maturing factor, and has other functions related to the hematopoietic system.

6. The reticuloendothelial cells, which are probably concerned with the synthesis of hemoglobin and conversion of hemoglobin into iron and bilirubin.

7. The circulating blood, which carries in suspension or solution all the elements supplied by the hematopoietic system.

It is important to keep in mind that the cellular elements found in the circulating blood are not produced there but are derived from the parent cells of the hematopoietic

system. One can not safely use the peripheral cellular elements as a criterion of the condition of the hematopoietic system. Mature erythrocytes circulate for a period of 90 to 100 days in women and 110 to 120 days in men. If a drug causes cessation of hematopoiesis, weeks will elapse before a significant decrease in erythrocyte count is manifested in the peripheral blood stream.^{1, 2, 3} The existence of a latent period in the decrease of the erythrocyte count was found in cases of polycythemia vera after injection of radioactive phosphorus.^{4, 5} The survival time of leukocytes has not been definitely determined. One authority has stated that the survival time is 21 days; however, another authority stated that the survival is 24 hours.⁶ The possibility does exist that the peripheral leukocyte count may not always be a true reflexion of the condition of the bone marrow. Bone marrow aspiration studies are indicated in all patients receiving drugs capable of having an adverse effect on the hematopoietic system. Bone marrow aspiration techniques are very simple.^{7, 8} A partial list of drugs used therapeutically which may have a damaging effect on the

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hematopoietic system is gold,^{9, 10} streptomycin,¹¹ aminopterin,¹² radioactive elements,⁵ thiouracil,^{13, 14} and sulfonamides.^{15, 16, 17, 18, 19, 20, 21, 22}

The hydantoins are used in the treatment of epilepsy. Dilantin (sodium diphenyl hydantoinate) was introduced by Meritt and Putman.²³ The unpleasant toxic effects of Dilantin are evidently not of a serious nature,²⁴ and no fatalities or damage to the

hematopoietic system have been reported. It is of interest that Nirvanol (phenyl-ethyl-hydantoin), closely related to Dilantin which was used at one time in the therapy of chorea in children, can, at times, produce agranulocytic changes and leukopenia.²⁵ Nirvanol is not included in New and Non-official Remedies.

Mesantoin (methyl-phenyl-ethyl-hydantoin) was introduced by Kozol²⁶ and Loscalzo²⁷ as an anticonvulsant in the therapy of grand mal epilepsies. There have been reports of toxic manifestations of a serious nature ascribed to Mesantoin. Ruskin²⁸ reported a case of fulminating dermatitis bullosa medicamentosa due to Mesantoin. Besides the skin manifestations in this case, the author also reported that the changes in the peripheral blood count were in the form of an increase in juvenile cells and a slight decrease in red cells and hemoglobin. There were no bone marrow studies in this case and no granulocytopenia was found. Bloom, Lynch and Brick²⁹ describe a case of Mesantoin intoxication with an important finding of a severe aplastic anemia. Bone marrow aspiration in this case revealed a very hypoplastic marrow. In addition to Mesantoin, the patient had also been receiving Dilantin. A case of a fatal aplastic anemia, following the combined use of Tridione and Mesantoin, was reported in 1946, and the authors³⁰ suggested that both drugs were probably bone marrow depressants. In a report on the treatment of 75 patients with Mesantoin, Aird³¹ described a fatal aplastic anemia in a 26 year old woman.

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Bone marrow studies were not done in this case and permission for an autopsy was refused. The patient had peripheral blood findings typical of an aplastic anemia. In addition to Mesantoin, this patient had been receiving Mebarol. In an unpublished report, Ziskind³¹ describes a case of agranulocytosis due to Mesantoin going on to recovery after cessation of the drug.

The case to be presented is that of a death following use of hydantoins, Mesantoin and Dilantin.

CASE REPORT

A thirty-eight year old former coal-miner was admitted to the hospital, August 22, 1948, because of nausea, vomiting, severe hiccoughs, convulsive seizures, and weakness of the left lower extremity, of four days duration. Almost daily during the past year, the patient had been having severe headaches and convulsive seizures. These seizures occurred mainly at night. During the daytime, he had frequent episodes, described by his wife: "He would just stare into space for 5 to 10 minutes." Because of his headaches and convulsive seizures, he went to a neurologic clinic in Alabama as a state rehabilitation case on July 9, 1948. A diagnosis of epilepsy was made and the medication prescribed was Dilantin, 0.09 grams, 3 times daily; and phenobarbital, 0.03 grams, twice daily. On July 9, his peripheral blood count was as follows: hemoglobin 14.5 gms., erythrocytes 4,910,000, leukocytes 5,250, eosinophils 5, segmented neutrophils 60, monocytes 3, lymphocytes 32. Electroencephalogram, roentgenogram of skull, blood Kahn, and urinalysis were normal. On July 23, he returned to the clinic feeling markedly improved. Only two seizures had occurred during the period July 9 to July 23. He was advised to continue the same therapy. On August 11, 1948, in addition to Dilantin and phenobarbital, he was given Mesantoin, 0.09 grams, three times daily. On August 21, 1948, there was an onset of nausea, vomiting, and severe hiccoughs with recurrence of convulsive seizures. It was because of these complaints that he reported to this hospital.

The patient had been admitted on a previous occasion to the hospital; namely, October 13, 1947 to October 28, 1947. The diagnosis at that time was conversion reaction, chronic, mild, manifested by abdominal pain, arthralgia, and cephalalgia. Labora-

tory findings and physical examination were normal on that admission, the blood count being as follows: erythrocytes 4,390,000, leukocytes 7,600, hemoglobin 13 gms, with a differential of eosinophils 3, neutrophils 72, lymphocytes 25.

An appendectomy had been performed in 1943, under spinal anesthesia. This operation was performed because of lower quadrant pain. Following operation, the lower quadrant pain persisted and six weeks post-operatively, he began to experience pain in the lumbar region which radiated to his neck and down his left leg.

His service record revealed that he was in the Marines in WW II, for less than one month, having been discharged because of recurrent pain in his lower quadrant.

Physical examination revealed a white man, acutely ill, well developed, poorly nourished and properly oriented. Breath was foul, and dental hygiene was poor. Gums were swollen and discolored; hyperplastic, with numerous areas of necrosis at gum margins; and no hemorrhagic areas found. Heart and lungs were normal. Blood pressure was 128 systolic and 80 diastolic, pulse 112. There was weakness of the left lower extremity, but muscle tone was good. Ankle jerks and knee jerks were diminished bilaterally and no pathological reflexes were elicited.

Roentgenograms were interpreted as follows: *Chest* on 8/23/48 and 8/26/48 were normal. *Flat Abdominal Plate* 8/23/48: There was gaseous distention of the small and large bowel. *G. I. Series* 8/21/48: No evidence of intrinsic lesion of the esophagus, stomach or first portion of the duodenum. At five hours later, there was a slight gastric residue but this was not believed to have been of pathological significance as the stomach was observed to empty normally under the fluoroscope. The remainder of the barium was distributed through the gas dilated loops of the jejunum and upper ileum. The slow motility of the barium was interpreted as due to ileus. *Lumbosacral Spine* 8/30/48: No pathological changes noted. *I. V. Pyelogram* 8/30/48: The outlines of the kidneys were obscured by gas collections in the small and large bowel. They were, however, apparently normal in size, shape, and position. Dye was excreted from both kidneys five minutes after the intra-

venous administration of the Diodrast. Normal appearing pelvis and calyces of both kidneys, as well as abdominal portions of both ureters, were demonstrated. The urinary bladder was regular in outline and showed no filling defects.

Laboratory findings are shown in Tables I and II.

in color. Because of his leukocyte count dropping to 750, sternal marrow puncture was performed on September 1, 1948. Marrow study showed hyperplasia of myeloid elements, with slight depression of erythropoiesis and maturation arrest at the myelocytic and metamyelocytic stage. During his course in the hospital, no seizures were ob-

TABLE I
PERIPHERAL BLOOD COUNT

Date	8/23/48	8/24/48	8/26/48	8/27/48	8/31/48	9/1/48
Erythrocytes	5,100,000	4,360,000	4,500,000	4,610,000	4,700,000	
Leukocytes	16,000	10,000	7,000	6,400	1,750	750
Hemoglobin	16 gm. 103%	14 gm. 91%	13 gm. 84%	14 gm. 91%	14 gm. 91%	
Neutrophils	90%	64%	68%	72%	50%	50%
Lymphocytes	8%	36%	24%	24%	50%	50%
Eosinophils			4%	4%		
Basophils	2%		4%			
Platelets						86,000

Malaria smears on 8/26/48 and 8/31/48 were negative.

TABLE II
URINALYSES

Date	Appearance	Reaction	S/G	Albumen	Sugar	Microscopic
8/23/48	Amber, Clear	Acid	1.020	Neg.	Neg.	Few WBC, Occasional Squamous
8/25/48	Amber, Cloudy	Acid	1.022	1+	Neg.	Occ. Hyalin Cast, RBC scarce
8/27/48	Straw, Cloudy	Acid	1.015	2+	Neg.	Spermatozoa present, RBC scarce, occ. WBC.

NPN 8/26/48—31.5 mg/100 cc.
Kahn was negative. Routine agglutination tests were negative.
Blood Chlorides (Whitehorn Method) 9/1/48—870 mg/100 cc.
Icteric Index 9/1/48—10 units.
CO₂ Volume Percent 9/1/48—50 vol. percent.
Spinal Fluid on 8/30/48—normal.

Bone Marrow Study (Sternal Aspiration) on 9/1/48:

Myeloblast	5%
Neutrophilic Myelocyte	65%
Eosinophilic Myelocyte	8%
Metamyelocyte (Juvenile form)	12%
Segmented Neutrophil	0%
Lymphocyte	10%
Pronormoblast (Macroblast)	3%
Normoblast	5%
Myeloid-Erythroid ratio	100/8

Course: On patient's second hospital day, fever developed and he was given penicillin. His temperature fluctuations are shown on the accompanying chart.

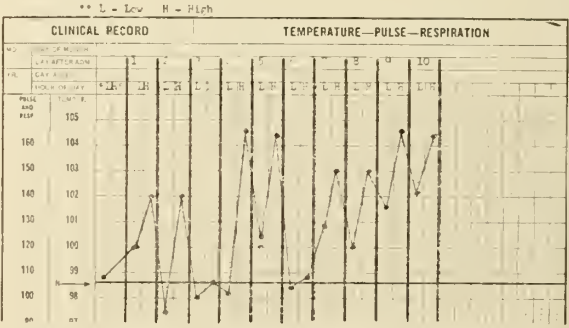
On the second and third day, his temperature rose to 102 degrees F; fourth day 98.6; fifth day 104.6; sixth day 104.4; seventh day 98.8; eighth day until the time of his death 103 to 104.6. The patient continued to have marked hiccoughs and nausea. He vomited frequently. The vomitus was coffee ground

served. Patient's course was progressively down hill. On the last day of his illness, his blood pressure fell to 60 systolic and 40 diastolic, and in spite of infusions and stimulants, he expired on September 1, 1948.

On September 1, 1948, one hour after death, an autopsy was performed.

GROSS PATHOLOGICAL FINDINGS

The body was that of a white man, 35 years of age, 5' 11" in height, and an apparent weight of 175 pounds. There were several



missing teeth and the remaining teeth were in very poor hygienic condition. The gums were somewhat inflamed and retracted. The skin was normal. There was no edema. All body cavities were normal.

Lungs were normal except for a moderate amount of hypostatic congestion present in the lower lobe.

Heart, aorta and vessels, spleen, liver, pancreas, adrenal glands, gastrointestinal tract, kidneys, bladder and prostate glands, seminal vesicles and testes and urethra, and brain were normal.

MICROSCOPIC FINDINGS

Liver: A moderate degree of fatty metamorphosis was prevalent around the bile ducts, and liver vessels. The distinct cloudy swelling throughout the liver tissue gave the appearance of acute degeneration. Damage was extensive and seemed to involve the major portion of the liver. This was a picture of recent acute necrosis.

Kidney: There was congestion of the glomeruli and passive congestion throughout the entire kidney. Many tubules and glomerular spaces were filled with albuminous-like substance.

Prostate gland, adrenal glands, stomach, spleen, heart and brain were normal.

Lungs: Sections taken from the right and left lower lobe showed peribronchial inflammation.

DISCUSSION

In the above fatal case, Mesantoin was used in conjunction with Dilantin. In the case reported by Bloom, Lynch, and Brick,²⁹ Mesantoin was also used in conjunction with Dilantin. In the case reported by Harrison, Johnson, Ayer, and Darrell,³⁰ Mesantoin was used with Tridione. There are no case reports of unusual toxicity in patients in which the only drug being used was Mesantoin. It is possible that Mesantoin will only be damaging to tissue when used in conjunction with other drugs of related chemical structure, such as Dilantin and Tridione, and barbiturates.

SUMMARY AND CONCLUSIONS

1. A case is presented in which death may have been caused by Mesantoin.

2. Mesantoin may be a bone marrow depressant and may also be injurious to other organs.

3. The peripheral blood picture is not always a true reflection of the condition of the blood forming organs. It is suggested that physicians, using drugs that are potentially toxic to the bone marrow, include sternal aspiration studies since a latent period exists between the time the bone is first damaged and the effect is manifested in peripheral blood counts.

Thoracic Surgery—The thoracic surgeon has much to offer the patient who has far-advanced tuberculosis. Streptomycin has made possible the salvage of many cases formerly considered hopeless when it has been properly used with modern surgical techniques.

A word of caution about streptomycin is advisable, however. As soon as the drug became available many patients with tuberculosis, regardless of the type of lesion, were treated with it. The patients felt better and gained weight and the infiltrative lesions cleared, but unfortunately the cavities seldom healed. Even when the streptomycin was continued, the symptoms gradually recurred. Sensitivity tests revealed that the organism recovered from the patient had become streptomycin-fast. The patients had to be prepared for surgery without the protection of streptomycin and the risk of operative interference was greatly increased.

When streptomycin is used in tuberculosis, a complete cure of the lesion must be expected or the drug should be reserved for use in conjunction with surgical treatment. Tuberculous pneumonia responds well to streptomycin and miliary tuberculosis is frequently aided greatly, but cavitory tuberculosis is usually improved only slightly.

Streptomycin used with surgery has greatly decreased the period of hospitalization for the patient with pulmonary tuberculosis. Patients with minimal disease may now spend more time in the hospital than many patients with far-advanced disease. Many patients with cavities and associated acute disease can be prepared for thoracoplasty in a relatively short time by pneumoperitoneum. The patient is then given streptomycin for about a week and the thoracoplasty is started. Cavities which are too large to be collapsed by thoracoplasty are resected. In cases in which one lung is destroyed by tuberculosis and the other is relatively free of disease, a pneumonectomy can be performed. Upper-lobe lobectomies have been routinely combined with upper thoracoplasty, and total pneumonectomies with complete thoracoplasty in our clinic, the purpose being to prevent over-distention of the remaining lung, which would cause activation of any remaining foci of tuberculosis. Patients who show no roentgen-ray evidence of residual disease after resection should be given six months of bed rest to be certain that the tuberculosis is completely healed before activity is resumed.—*Harter, Texas State J. Med., December 1949.*

HORMONE THERAPY IN CATARACT

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About thirty years ago, while engaged in teaching boxing to units of the Army in Germany, it was observed that men who were entirely continent were more successful in their contests; for, after engaging in one night of excess one week before a contest, six of seven champions lost their crowns, but after two months of strict training again these same men regained the lost laurels of the ring.

In analyzing these contests it was decided that the loss of that male hormone having to do with the libido and personality was responsible for the ignoble showing of these men, and so must have a very definite bearing on the personality and general health of the individual while those secretions were available in the economy.

This created a train of thought that has remained with me since and has led to considerable conjecture and experimentation, for I have observed the changes of age in mankind and have wondered why men grow old, and why the changes which age brings take place. The thoughts which are to follow in this paper will reflect my thinking and will give some conclusions which I have reached.

About twelve years ago I noticed that cataract was most prevalent in people about the fifth decade of their lives, for, even though definite cataractous changes are not grossly present, studies with the slit lamp and careful refraction will determine these changes which may have escaped a casual examination.

The incipient cataract presents very few evidences of pathology, usually only a change in the refraction of that eye, but, when the stage of intumescence has been reached, then the changes are apparent, even to a casual examiner; for, if there is no other reason, the definite changes in refraction should at once arouse one's curiosity. It is in this stage of lenticular change that our specialty has hoped to accomplish something in the way of treatment with the

hormone Testosterone, for at the age when the so-called "change of life" is occurring there is an abatement of the stimulating hormone secreted from the glands of procreation which cause a loss of libido and changes in personality. At this time the entire body undergoes definite changes, the body takes on fat, the muscles become soft and flabby, the face begins to present wrinkles and the hair shows streaks of gray. In general there are changes which we have become accustomed to associate with the encroachment of old age. This is the middle span of life.

This field is one strictly for the endocrinologist, but I have ventured to conjecture about some of the glandular functions in a way which, apparently, has not been seriously considered by this group of research workers. Many observers feel that the thyroid and the parathyroids are the synergistic glands of the economy and that they are the prime factors in a balanced metabolism but it is my opinion that the particular hormone secreted from or by the sex glands is the principal factor in this metabolic balance.

It is well known that almost the entire removal of the thyroid gland from the young has no particular effect on the sex life of that individual, and removal of the parathyroids, if tetany is avoided, likewise has no effect, but removal of the sex glands not only affects his ability to procreate but removes the stimulus which seems to be necessary for the proper balance of his metabolic functions; for the castrate immediately begins to put on weight, becomes lethargic, and does not resent intrusions with his former ardor.

When frightened or emotionally upset there is an outpouring of extra adrenalin into the blood stream which gives us added strength to resist or combat the frightening agent but the castrate, even though his adrenalin output is the same, flees rather than engage in combat. What then is the factor which differentiates these two animals, the castrate and the non-castrate except it be the loss of the particular sex hormone which has

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been denied by castration or by the changes of age in that animal?

Surgeons, in their search for the agent to slow down aging, with its vicious changes, have for many years sought to implant sex tissue into the economy only to see it fail to function, either because it was absorbed or converted into a fibrous mass having no beneficent influence. Only in recent years, since the availability of a suitable preparation of the hormones, have men engaged in research been able to replace these lost stimuli, and, while they are not as efficient as the hormone in its natural secretion, they do mitigate some of the noxious symptoms produced by the aging process.

Having all these things in mind, as well as many others which will also present themselves to your minds, I began the experiment of administering the male hormone to cataract patients in whom the lens changes had not progressed to a point that would render any treatment efficacious. I have felt that cataractous changes occurred because of the changes in metabolism in the general economy which in turn affected the metabolism of the lens itself.

It is here necessary that I go, superficially, into the anatomy of the lens and discuss with you something of its metabolic processes in order that we may connect our need with its remedy. At about the third month of uterine life the optic vesicle invaginates into the optic bulb to form the lens which at this time is represented by a simple epithelial sac nourished by the hyaloid artery. Soon thereafter there is a migration of the central cells of the lens sac to form the nuclear portion of the lens and the cells of the periphery, or equator, begin to form what we are pleased to call the lens fibers. At about the eighth month the hyaloid artery disappears, usually, although it is present occasionally and sometimes remains filled with fluid, leaving the lens dependent upon its own system of metabolism for its continued growth and health and this system of metabolism is a very complicated and unknown thing, for no man has been able to state definitely that thus and so be true regarding this nourishment of the lens.

Now I shall depart into the realm of conjecture and theory, in which one man's thought is equal to that of others if he give it careful and intelligent consideration. The

lens capsule is said by some observers to be a simple exudate, thrown down by the ectoderm at the same time the lens is formed. Others state that it is a definite structure of its own, formed by the ectoderm and having specialized function. Still others believe that it is a product of fetal development and loses its function at about the eighth month, when the lens is complete.

Let us look at this capsule for a moment and try to decide for ourselves just what it is. It is unorganized, having neither cellular structure nor any element of cell structure, being almost glassy in appearance, about three times as thick anteriorly as posteriorly and enveloping the entire lens structure and being strongly adherent to the underlying lens fibers, attached by a series of polygonal cells, apparently from the lens fibers.

Now let us look at the zonule of Zinn for a moment. We see the hyaloid membrane dividing into two layers as it lies in the *oro serrata*, one portion going down to invest the anterior portion of the vitreous while the other invests the ciliary body and falls over the anterior edge of this body to form the supporting ligament of the lens. Now does this anterior portion of the hyaloid membrane partake of some of the characteristics of the ciliary muscle as it passes over this structure and if not then how does it function as an expanding agent of the lens in accommodation? These zonules are attached strongly to the ciliary body and attach in a double row which partially cross at their base to form the canal of Petit, which canal is so enclosed by these zonules that it may be inflated. Now if osmosis accounts for the nutrient media in the lens why does this interchange of fluids occur in a structure which has neither nuclei nor other definite cellular resemblance through a rather thick and apparently impermeable membrane, the capsule, as reports of experiments will partially demonstrate, and why is there not an interchange of nutrient matter at the equator where there is definite cell activity and from which center springs all the lens fibers, very much like the branches of a tree from its chemical laboratory in its root system?

We have felt that osmosis does not occur through the capsule but that that structure is so placed and formed as to protect the lens

fibers from that very osmotic process which some workers attribute to the capsule. If osmosis occurs through the capsule why is it only through the anterior portion, as it most assuredly would have to in event of any function in this respect, since the posterior portion of the capsule is not in contact with any fluid whatever except after death when Morgagni's fluid is found in the patellar fossa? Why the necessity of osmosis to lens fibers which have no cell structure and which apparently are incapable of any metabolic process whatever, since any minor injury of the capsule which admits aqueous to the lens fibers is straightway manifested by cataractous changes in those fibers? Nature does not do useless things and since these structures reoccur millions of times in exactly the same way they are assuredly a definite pattern of growth and anatomy and not anatomical accidents as some observers have intimated when they state that the zonules are an expression of faster growth by the interior structures of the bulb than the lens fibers and so are merely adhesive bands left from this too rapid growth. I feel that this position is untenable to an anatomist, for accidental growth of tissue may occur but it is always the exception and not the rule.

If osmosis takes place through the capsule, then where does the process of oxidation and digestion take place? The lens fibers are incapable of this process while the cellular structure at the equator is entirely capable of and amenable to metabolism of ingested matter. Is it not more logical to think that the zonules, having access to the cortical layers of the lens structures through their insertion into the deeper layers of the capsule, are apt to be afferent and efferent in character and that through them is the interchange of suitable fluids effected and thus the products of metabolism brought to the bases of the lens fibers and spread out through these fibers by continuity and pressure exerted by the closely adherent capsule?

Upon examination of the capsule of a mature cataractous eye we find that the capsule is wrinkled in some aspects as though there was a shrinkage of the lens substance within, and this fact aroused our curiosity since, if metabolism occurs through the capsule, it would seem that with an intact and healthy capsule the lens substance should

continue to receive a normal metabolic rate and should therefore remain healthy. Since the lens substance changes before there is any apparent change in the capsule, it would seem that there is some disturbance in lens metabolism which is independent of the functioning of the capsule.

It is believed that since these things are true then there is no way for the lens to obtain adequate nutrient matter except through the zonules or through the canal of Petit, for there is no other means by which it could secure nourishment except one of these routes. I have injected the ciliary body with two minims of one per cent Mercurochrome and have seen the appearance of this colored matter, faintly but unmistakably, in the portion of the lens adjacent to the injected field, and while it appears only briefly and at the equator it is certain that this colored matter must have either traveled through the zonules or by proximity to the ciliary body have absorbed enough of the dye for it to be manifest.

Injections of five per cent saline into the anterior chamber daily for fifteen days has not caused any appreciable change in the lens itself or the capsule that I have been able to determine either with the lamp or by refraction, but there is some turgidity of the aqueous and apparently of the posterior surface of the cornea. Hypotonic solutions have not caused any notable change either, while sugar solutions up to ten per cent (glucose) injected into the anterior chamber daily for ten days have not caused any appreciable change, and the substitution of spinal fluid in the aqueous chamber for the aqueous has not caused any change except a slight refractive aberration. The entire vitreous has been replaced with saline and with spinal fluid with no effect on the lens substance or the capsule that I have been able to note, and the only change that has occurred has been in refraction, that being what one would expect in a fluid vitreous.

These replacements would seem to cause some disturbance in the lens if osmosis were the route of nutriment but if we consider that the zonules are afferent and efferent in nature we may readily understand that they can carry nutrient matter into the lens substance without any regard for the capsule, for in diabetes we sometimes find twice

as much sugar in the lens substance as we find in the aqueous, and no one has separated the nuclear portion from the cortical portion of the lens in making a chemical analysis of its contents. Until that is done we shall not know whether the cortex contains a higher percentage of nutrient matter than the nuclear.

One would gather that I am attempting to show how and why a cataract occurs rather than a method of treating the incipient cataract, but one cannot separate the two efforts, for we must try to understand something of the method by which the lens changes before we are able intelligently to try to introduce anything into the economy that might be beneficial to that ailing lens.

In the application of the male hormone in this connection I felt that if I might increase the general metabolism and the health of the patient it would be possible that this improved metabolism would also manifest itself in an improved state of health of the lens. In 1923 a German ophthalmologist, Gallus, first advocated the exhibition of the hormone in this connection but, there being no suitable preparation, he was forced to forego the experiment and there is no record of consistent and continuous use of this drug for this purpose since, although psychiatrists have used it in large dosage for many years in certain types of neuroses and psychic disorders with a varying amount of success, and, lately, French investigators have used it in certain types of arthritis with some benefit to the patient.

Patients to be subjected to this therapy must have first a very careful examination and the fact established that they have passed the climacteric, for it would be futile to introduce any therapeutic agent into the system which already abounded there with any hope of results from it. A prostatic examination is done on the males and a pelvic on the females in order that any malignant changes may be discovered, for, while this drug is said to be non-carcinogenetic, it has been a rule with us not to exhibit the drug in the presence of prostatic nodules or of the polychromatic cells sometimes found in the excretion of potentially malignant prostates nor where any changes of a malignant nature has taken place in the cervix or other portions of the uterine anatomy. Foci of infection must be eliminated, as well as the

possibility of syphilis, tuberculosis or diabetes, for no treatment of a metabolic nature will be effective in the presence of any of these conditions.

Having determined that our patient is suitable for the experiment, I begin the administration of the drug in ten milligram doses daily for three months, sublingually, orally or parenterally, and then check the lens with the lamp and check refraction. If I find the patient is showing no progress, the drug is stepped up to fifteen or twenty milligrams daily for another three months when the same examinations are made. This method is continued for nine months before I conclude that the treatment is hopeless and so abandon it. Of one hundred fifty three patients under observation, seven have gone on to needed surgery, eleven have deserted, while the remainder have either remained stationary or have materially improved their vision.

It would be foolish to state that this is a panacea for all cataracts or for any cataract, for we have seen too many cataracts which clear themselves with no treatment; and we cannot say what changes take place in the human economy, with which we are unfamiliar, which might exert an influence of beneficence on a sick lens; but we do feel that this drug has materially aided some of these patients and that it is entitled to further consideration by trained observers who are able to look at the experiment with the desire to know the truth, whether it be inimical to our work or whether it fully corroborate our findings.

The great need for intelligent research in this matter is apparent. Each experiment opens a wider field of inquiry and adds to the zest of effort if then, a great number of men are working on the endeavor, we may finally discover some of the secrets of the lens, its metabolism and the processes which it must undergo in order for a cataract to form and, possibly, a cure for the disease without the dubious benefit of surgery.

It has been suggested that reputable ophthalmologists will have a very skeptical approach to this work but that is exactly the spirit which will discover whether it has any merit or not and for that reason is much more desirable than friendly appraisal.

The sincere request is made that men be-

come better observers and seek for the truth of the hidden mysteries of their work with the determination that they shall discover

for ailing mankind every remedy they possibly can and therein justify their existence as physicians.

PHYSICAL MEDICINE IN HEMIPLEGIA

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Hemiplegia is not a disease entity but rather a symptom denoting paralysis of the right or left side of the body. It may be sudden or gradual in its onset and more common among males than females.

Disease of the cerebral vessels is its common etiologic factor. The pathology and differential diagnosis are not the scope of this paper because any well known textbook will give ample information. However, the Physical Medicine management, which has been greatly and sadly neglected, will be discussed in detail.

Not very much had been done for these patients prior to World War II in rehabilitating them to useful life but during and following the war great strides have been made in Rehabilitation Centers throughout the country in ambulation, vocational guidance and occupational therapy for the hemiplegics.

There are two avenues of approach to the management of hemiplegia: 1. Prophylactic, and 2. Definitive. The first one is used in the acute phase and the second is employed after the acute phase has subsided, which takes about two or three weeks. During the acute phase the following points are to be observed: good nursing care, adequate rest, a quiet room, firm spring and mattress, good bed posture, foot board to prevent foot drop, long longitudinal sand bags for the lower extremity to prevent external rotation, a pillow to support the paralyzed arm, a small pillow in the axilla, a pillow under the head and neck, rolled up towel under the leg just

above the heel to prevent pressure on the heel, a cradle over the leg to prevent bed clothing pressure and, finally, frequent change of position.

The second phase deals with the definitive treatment of hemiplegia; namely, physical therapy, occupational therapy, and vocational therapy. Since psychotherapy and speech therapy do not come under Physical Medicine, they will not be discussed but they should have a definite place in the therapeutic management of hemiplegia. In physical therapy, heat in the form of infrared should be applied to the involved extremities. The parts should be well protected with gauze from excessive heat, especially in cases where thermal sensation is lost. After heat therapy the parts should be massaged with light strokes directed toward the heart. Massage will improve circulation and help venous flow. The patient should be in a comfortable position and parts well supported.

Exercise should commence with passive motions and be followed later by active assistive and, finally, by active motions. Pulleys hooked to the foot of the bed can be utilized for shoulder and leg exercises. If the face is involved, blowing through a paper straw or blowing bubbles will help. Exercise routines have been presented in several publications.

Electric stimulation is a debatable subject, yet in skilled hands it is beneficial. It is given with a low voltage generator in the flaccid stage of paralysis. However, lately, it has been tried with gratifying results even in the spastic stage.

Ambulation should be started within two to eight weeks. First, the patient should be sitting in bed; then step on the floor to regain balance. As the progress of the patient permits, further instructions are added to his

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daily routine, such as parallel bars, practicing reciprocal motions and, finally, crutch walking and climbing stairs. Self-care activity should commence with ambulation. Teach the patient how to feed and wash himself.

Occupational therapy should be of the functional type in the form of painting pictures, playing with blocks and cutting out patterns. Later on a diversified type of occupational therapy can be added in the form of weaving, leather work and woodwork.

For vocational guidance, books on subjects in which the patient is interested should be provided, with courses of instruction, manual training and other light occupations which eventually might make the patient independent economically. Proper mental attitude on the part of the therapist and the patient is of paramount importance.

SUMMARY

1. A great number of hemiplegic patients will be benefited by Physical Medicine.
2. Treatments should commence within two to four weeks after the acute illness has subsided.
3. Physical Medicine should be taught in more medical schools so that graduates may apply the necessary treatments.
4. No physical therapy should be applied unless prescribed and supervised by a physician who has been trained in Physical Medicine.

PEDIATRIC CASE REPORTS

Edited by

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D. J. M., aged 13 months, was brought to the Children's Clinic on September 11, 1948 with the following history and findings: She had been vomiting frequently for approximately three weeks and had a convulsion (Jacksonian) about twelve hours previous to the time of examination. At this time, the right arm and leg were paralyzed and the right pupil did not react to light. The examination otherwise was essentially negative. The spinal fluid revealed 5 lymphocytes and a negative globulin. Nonprotein nitrogen was 27 mg.

Blood Count:

Hb.	9.5 gm. (57%)
RBC	3,890,000
WBC	11,050
Polys.	45
Lymphs.	50
Baso.	2
Eos.	1
Monos.	2

During the next four days she had many convulsions involving only the right arm and leg and face. The fourth day, twitchings of the face were almost continuous. The fever ranged from 100° to 102°. Since the convulsions were getting worse and the spinal fluid was normal, the possibility of an abscess or tumor of the brain was considered. She was referred to Dr. Garber Galbraith for neurologic examination. He found an increased cell count in the spinal fluid and a positive globulin and referred her back for treatment. On September 17, 1948 the spinal fluid revealed 413 cells, polys. 62%, lymphs. 34%, sugar 45 mg. and negative globulin.

Blood Count:

Hb.	10 gm. (60%)
RBC	3,760,000
WBC	22,100
Polys.	65
Lymphs.	33
Monos.	2

No acid fast bacilli were found in smears but cultures and guinea pig inoculations were positive for tuberculosis. The neck was beginning to get stiff at this time and gradually became worse. The Babinski-Kernig and knee reflexes were hyperactive.

Clinical Diagnosis:—Tuberculous meningitis and possibly tuberculoma in the left cortical area of the brain.

As soon as the diagnosis was made, an effort was made to find the source of the contact. It was found that the grandfather had had a cough for two years and had an old fibrotic tuberculosis, with the sputum loaded with tubercle bacilli.

She was started on dihydrostreptomycin intramuscularly, 250,000 units (250 mg.) every six hours for two days, then 125,000 units (125 mg.) every six hours for two days, then 100 mg. every six hours for two weeks, then 300 mg. (0.3 gm.) once daily.

This was continued for about one month when she began to have convulsions again. This was considered to be a very bad sign

after this amount of treatment and it was felt that further treatment would be of no value and the streptomycin was discontinued. She died November 10, 1948.

COMMENT

It is most important to find the source of infection and isolate this person or persons from the patient as soon as possible to prevent further exposure, as the size of the infecting dose is very important.

This is an instance in which the childhood type of tuberculosis in the lungs underwent caseation with spreading of organisms through the blood stream, development of miliary tuberculosis and tuberculous meningitis. Because of the right-sided paralysis and convulsions, one might suspect a tuberculoma in the left cortical region in or near the motor area.



Figure 1. Spleen with large tubercle. Mesenteric lymph node with many caseous tubercles. Ghon tubercles at base of right lung with large caseous nodes at the hilum of right lung. One of these involves the wall of pulmonary vein.

AUTOPSY REPORT

The following is the autopsy report rendered by Dr. J. D. Bush:

External Examination: The embalmed body is that of a well-developed, well-nourished white female infant, 75 cm. in length. The hair is moderately long and black. The anterior fontanel is open. The forehead and face are covered with fine hair. An incision from the xiphoid process to the symphysis pubis has been partially sutured but loops of intestine are protruding through the incision. The superficial lymph nodes are not palpable. There is no edema.

Peritoneal Cavity: When the primary incision is made, the fat of the anterior ab-

dominal wall above the umbilicus measures 1 cm. in thickness. The liver edge extends 3 cm. below the right mesentery near the ascending colon. Other mesenteric lymph nodes are enlarged and firm. There are no adhesions and there is no fluid present.

Pericardial Cavity: The pericardial cavity contains a few cc. of blood-stained fluid. There are no adhesions.

Pleural Cavities: There are a few firm adhesions about each lung. There is no fluid present.

Heart: The heart weighs 50 gm. There is an unusual amount of subepicardial fat. The myocardium is firm and red-brown. It averages in thickness R. V. 0.5 cm. and L. V. 1 cm. The endocardium, valves, and valve leaflets appear natural. Valves measure in circumference T 6, P 3, M 4, and A 3 cm. Coronary arteries show no evidence of obstruction.

Aorta: The aorta appears natural.

Lungs: The right lung weighs 79 gm. and the left 69 gm. The lungs are subcrepitant. At the base of the lower lobe on the medial surface just beneath the pleura is a round, caseous area 1 cm. in diameter. There is an area of caseous necrosis about the hilum and the bronchi in the area are dilated and filled with soft, caseous material. It appears that all of the tissue about the hilum is involved and one caseous mass lies just beneath the lining of a blood vessel. Throughout the remainder of the lung there are irregular yellow areas of consolidation. The left lung shows no areas of caseation but there are irregular yellow areas of consolidation as already described.

Liver: The liver weighs 322 gm. Beneath the capsule there are irregular grey-white areas which measure 1 to 2 mm. in diameter. In the surface made by cutting, the lobular markings are indistinct.

Gallbladder: The gallbladder is filled with yellow bile.

Spleen: The spleen weighs 28 gm. Beneath the capsule there are irregular grey areas 1 to 2 mm. in diameter. In the surface made by cutting there is a little pulp on scraping. There are numerous soft, yellow areas 1 to 3 mm. in diameter. The follicles are visible.

Adrenal Glands: The adrenal glands weigh together 8 gm. They show no unusual changes.

Kidneys: The kidneys weigh together 90 gm. The capsule strips from a smooth, grey-red surface. Cortex is even and averages 5 mm. in width. Pyramids, pelvis, and ureters appear natural. There is an occasional soft, yellow area 1 to 2 mm. in diameter.

Thymus Gland: The thymus gland weighs 6 gm. It shows no gross change.

Mesentery: In the mesentery there are many firm lymph nodes which measure up to 1.5 cm. in diameter. The largest is a caseous lymph node lying near the ascending colon. It measures 2x1x1 cm.

Gastro-Intestinal Tract: The esophagus and stomach show no unusual changes. In the jejunum and ileum there are many shallow ulcers measuring from 1 to 3 mm. in diameter. The large intestine shows marked congestion but no definite ulcers.

Pancreas: The pancreas weighs 18 gm. It shows no gross change.

Urinary Bladder: The urinary bladder shows no unusual changes.

Genital Organs: The genital organs show no unusual changes.

Head: Not examined.

Spinal Cord: Not examined.

Anatomical Diagnosis: *Lungs*—caseous tuberculosis, primary infection type; *liver*—miliary tuberculosis; *spleen*—miliary tuberculosis; *kidneys*—probable miliary tuberculosis; *small intestine*—tuberculous enteritis; *mesenteric lymph nodes*—caseous tuberculosis.

MICROSCOPICAL DESCRIPTION

Heart: Sections of heart show no evidence of inflammatory reaction. There are no tubercles present. The cross striations in the fibers are faint or entirely absent.

Lungs: In sections of lung taken through the large caseous area there is marked necrosis of tissue with an absence of cellular detail. At the margin of the large caseous area there is hemorrhage and in the surrounding lung tissue there are many tubercles. Scattered throughout all the sections of lung there are solitary and conglomerate tubercles made up of many giant cells surrounded by epithelioid cells, fibroblasts, and lymphocytes. The caseous necrosis is evident only in the large lesion. The small tubercles are particularly numerous around branches of the bronchiole.

Liver: In sections of liver there are scattered tubercles. These are small. In the sinusoids there are numerous erythrocytes.

Gallbladder: In sections of gallbladder no changes are noted.

Spleen: In sections of spleen there are numerous tubercles as described in the lung. One large caseous area shows calcification in its center. Lymphoid follicles are somewhat distorted and there is some infiltration of neutrophils in the splenic sinuses.

Adrenal Glands: Sections of adrenal glands show no changes.

Kidneys: Sections of kidney show the glomeruli capillaries are filled with erythrocytes. There are occasional accumulations of purple granular material in the lumen of the connecting tubule.

Genital Organs: Sections of uterus show no unusual changes.

Pancreas: In sections of pancreas islands of Langerhans are numerous. There are no changes in the acinar tissue.

Intestine: Section of small intestine show an occasional tubercle in the submucosa.

Lymph Nodes: In numerous sections of lymph nodes there are many tubercles as described in sections of lung. They occupy both the cortical and medullary portion of the lymph node.

FINAL DIAGNOSIS

Miliary tuberculosis (lungs, liver, lymph nodes and small intestine). Tuberculous meningitis (clinical). Lungs: caseous tuberculosis. Small intestine: tuberculous enteritis.

Malaria as Cause of Epilepsy—Chronic recurrent malaria may cause epilepsy, according to three doctors of the U. S. Veterans' Administration Center, Los Angeles.

Writing in the December 17 Journal of the American Medical Association, Drs. David R. Talbot, Alan C. Elerding and John O. Westwater report that three veterans with recurrent malaria developed seizures characteristic of epilepsy.

Malaria may cause permanent impairment of the gray and white matter of the brain, the doctors point out.

In two of the cases, definite improvement in mental attitude and abnormal behavior occurred after antimalarial treatment, the doctors say. In the other case, however, brain damage was thought to be permanent.

Absence of chills and fever does not rule out the occurrence of malaria in persons who live, or have lived, in the tropics or other malarial areas, according to the article.

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PYOGENIC DERMATOSES

"The literature is replete with evidence of the high index of allergenicity of the more effective agents used in the therapy of the various pyodermas. The alarming incidence of the apparent induction of hypersensitivity to such valuable medicaments as sulfonamide drugs and penicillin when they are used topically to treat the minor dermatoses, thus vitiating their future usefulness in generalized and systemic infections, has prompted the cautioning editorial by Sulzberger and Baer in the 'Year Book of Dermatology.' It is therefore expedient that information concerning the useful and less allergenic therapeutic agents be promulgated widely. We are reporting some significant clinical results which we have noted following the topical administration of a new antibiotic, bacitracin. These results corroborate the findings of Miller, Slatkin and Johnson reported recently in the Journal of Investigative Dermatology.

"In Science (Oct. 12, 1945) Johnson, Anker and Meleney reported the recovery of a new antibiotic, bacitracin, from a strain (Tracy I) of *Bacillus subtilis*. . . . Meleney and Johnson reported 100 surgical infections treated locally by topical applications and direct injection of bacitracin into furuncles, carbuncles and deep and superficial ab-

cesses. An ointment containing the antibiotic was used for open lesions. The results were favorable in 88 per cent of the cases, and response was rapid. Bacitracin did not cause irritation of the conjunctiva. It was not locally toxic or irritating and its activity was not inhibited by plasma, blood, pus, broken down tissue or organisms which produce penicillinase. They concluded that bacitracin would be of value if it succeeded where penicillin and sulfonamide compounds did not."

The above are the opening paragraphs of the study of this subject by Derzavis and others.¹ The Army Medical Corps investigators go on to tell us that "It is our impression that bacitracin is the most effective agent we have used in the therapy of superficial streptodermas and staphylodermas. Response to this topically applied agent is at least as rapid as responses to sulfonamide compounds, penicillin, chlorohydroxyquinoline, iodochlorohydroxyquinoline nitrofurazone (Furacin) and ammoniated mercury. More important is the extremely low incidence of allergenicity of the bacitracin preparation used in this investigation. The only instance of dermatitis venenata occurred in a patient with pyoderma and chronic lymphatic leukemia who was hypersensitive to a multiplicity of therapeutic agents.

"The direct contact of bacitracin with the infected area is evidently necessary to effect a cure. This is evident in the rapid response of such superficial pyodermas as impetigo contagiosa and infectious eczematoid dermatitis. Contrariwise, the deeper folliculitides, including sycosis vulgaris and hidradenitis suppurativa, exhibited failures in roughly the same proportion as we had experienced with other antibacterial agents."

The authors' conclusion in part is that "One hundred and thirty-eight patients with deep and superficial pyodermas were treated with an ointment consisting of 1,000 units of bacitracin per gram of petrolatum. Response to therapy was rapid and effective in all lesions wherein direct contact with the bacitracin ointment was obtained. . . .

1. Derzavis, Jack L.; Rice, Major J. Sidney, and Leland, Lt. Col. Louis S.: Topical Bacitracin Therapy of Pyogenic Dermatoses, J. A. M. A. 141:191 (Sept. 17th) 1949.

"It may be concluded that bacitracin is a new and potent agent for the treatment of the accessible pyodermas. Of particular note is its extremely low index of allergenicity as evident in results obtained at this time."

The Washington observers have thus far reported upon an insufficient number of cases to permit us to draw positive conclusions as yet. But it is certainly to be hoped that their promising work will be extended and verified both by themselves and others.

X-RAYS AID DOCTORS IN DIAGNOSIS OF Q FEVER

X-rays can play an important part in the diagnosis of Q fever, which has been found in various sections of the United States, especially in Southern California where more than 300 cases have been recognized since May 1947.

Three Los Angeles physicians, writing in a recent issue of *Radiology*, a journal published especially for x-ray specialists, state that chest films of Q fever patients show to what extent pneumonia has developed. The x-rays reveal the exact pulmonary involvement.

The doctors—George Jacobson, Ross B. Denlinger and Ray A. Carter—believe from their x-ray studies that Q fever is often confused with primary atypical and virus pneumonias, influenza and meningitis.

"Because of the minimal respiratory symptoms," they say, "many cases of Q fever with pneumonia are overlooked, particularly those presenting the symptom complex of severe headache and fever."

Q fever is caused by a rickettsia, a bacteria-like microorganism, which was first isolated in Australia in 1937.

The organism, the doctors write, has its chief reservoir in cattle and has been found in more than half of the unpasteurized milk specimens tested in Los Angeles county. There is no person-to-person transmission of the disease and the incidence is highest among meat packers, laboratory workers and those working in or living near dairies. The exact mode of transmission to man is unknown.

One attack of Q fever confers immunity for an indefinite period of time. Relapses may occur during convalescence. Symp-

toms include fever, sometimes chill, nausea and vomiting, and severe headache.

None of the new drugs has had any demonstrable effect upon the duration or severity of the illness. Aureomycin, however, was tried in only one case with apparently favorable results. Patients usually recover from the disease, and the Los Angeles doctors point out that there have been only three known deaths in Southern California.

The first known outbreak of the disease in the United States occurred in Amarillo, Texas, in March 1946, with 55 cases, including two deaths. A second outbreak of 36 cases occurred in Chicago in August 1946. Both of the epidemics were explosive, of short duration, and were limited to persons handling cattle and sheep enroute to or during slaughter.

URGES TRAINING OF BLIND FOR JOBS IN X-RAY DARK ROOMS

A St. Louis physician, writing in the November issue of *The American Journal of Roentgenology and Radium Therapy*, urged industrial and hospital x-ray departments today to explore more fully the possibility of training blind persons, both men and women, for permanent jobs in the dark rooms where x-ray films are processed.

The very best technique employed by x-ray specialists is "only as good as the dark room processing of the films," Dr. Sherwood Moore, director of the Mallinckrodt Institute of Radiology of St. Louis, said in his plea for the employment of blind dark room x-ray technicians.

Dr. Moore said that with the help of the St. Louis Bureau for the Blind he employed three blind men in his laboratory and after a month's training they acquired manual proficiency which justified attempting to use them under actual working conditions. "The blind men are happy," Dr. Moore wrote, adding that one of them commented "this is far better than making brooms."

"There is hope," the article said, "that the film industry and commercial photographic laboratories will take up this form of employment for those handicapped by loss of sight."

One advantage in hiring the blind, the doctor explained, is that experienced x-ray technicians "are freed from the monotony

and fatigue of dark room work, where their superior abilities are more or less wasted.

"Success in employing blind dark room technicians depends upon the selection of suitable individuals who should be thoroughly trained in advance of embarking on the actual work. The selection should be left to the state or federal agencies for the blind. These agencies have the facilities for giving aptitude tests and finding persons with the proper background."

Dr. Moore said he found that blind employees can unload and load and place a film in solution as speedily as can a technician with sight.

"The Federal Security Agency, Office of Vocational Rehabilitation and the Illinois Division of Vocational Rehabilitation and a representative from the Bureau for the Blind have investigated this training program and expressed the view that it has possibilities for a good livelihood for the blind. It is not and should not be a method of getting cheap help.

"Such a training program may open a door for large opportunities."

DOCTORS EXPLAIN WHAT CAUSES BURNING FEELING IN STOMACH

People who often complain of a burning and aching feeling in the stomach shortly after meals are most likely suffering from what two Salem, Oregon, doctors term as a form of gastritis.

The doctors—James B. Haworth and Noel B. Rawls—state in a recent issue of the journal, *Radiology*, that the condition is quite common, saying it is the "most common abnormal manifestation" observed by x-ray specialists in their routine examinations of the upper gastro-intestinal tract.

The discomfort is often relieved by anti-acid powders. Spices, alcohol and coffee aggravate the condition, while a soft diet usually relieves the symptoms. People who are classified as "the nervous type" commonly suffer from this condition which is characterized by discomfort both before and after eating and when the stomach is empty.

The two Salem doctors believe that x-ray examination affords the best way of tracking down the trouble, giving the most detailed information concerning the condition.

If treatment is not started within a reasonable time, the condition is likely to lead to the formation of an ulcer. The doctors cited several cases in which an ulcer developed after the gastritis was definitely identified by x-ray examination.

After the condition has been identified, the doctors believe that the best way to cure it is to give the stomach and gastric mucosa as much rest as possible. The patient, they said, should discontinue the use of alcohol, tobacco, and coffee because of the irritating effects they have on the lining of the stomach. Sedatives are advisable.

The emotional factor is important, the article said, in treating the condition. The "malevolent effects of tension and worry" are explained to the patient, who is urged to discuss his personal problems freely with the physician.

"We endeavor to emphasize to the patient the fact that he has a six months disease at the very least," the doctors wrote, adding that subsequent x-ray examinations showed complete remission of symptoms at from three to four months after treatment was started. An additional period of treatment was advised, however, in order to hold down chances of recurrence.

MEETINGS CANCER SEMINAR

A three-day seminar on cancer, primarily for members of the Medical Association of the State of Alabama, will be held at the Medical College of Alabama in Birmingham on February 21, 22 and 23.

It will be conducted by at least ten specialists widely recognized for their work in their various fields and will give Alabama doctors the opportunity of hearing comprehensive expositions of the most modern and effective methods of cancer detection, diagnosis and treatment.

The seminar will be the first large scale session of its kind ever conducted in the state. It is being sponsored jointly by the Association, the Jefferson County Medical Society, the Extension Division of the University of Alabama, and the Alabama Division of the American Cancer Society.

Several hundred doctors are expected to attend. Invitations are being extended to members of all state and county medical

societies throughout the Southeast, and out-of-state representation likely will be large. There will be no registration fee.

Dr. Karl F. Kesmodel of Birmingham, Chairman of the Committee on Arrangements, said that the program had been arranged to give doctors up-to-the-minute information they indicated they wanted most on new and advanced methods of detection, diagnosis and treatment.

"The committee also has kept in mind," Dr. Kesmodel said, "the dissimilar problems that confront the specialist and the general practitioner. The subjects and the method of presentation will give them information most useful to both of them."

The first day's sessions will be climaxed by a dinner at Hotel Tutwiler at which the speaker will be Dr. Charles S. Cameron, Jr., of New York, Medical and Scientific Director of the American Cancer Society.

Doctors who attend the seminar also will have the opportunity of inspecting the research activity into a mass screening test for cancer now being conducted in one of the South's most modern laboratories by the Medical College of Alabama under the direction of Dr. J. K. Cline.

Reservations for the seminar should be made through Dr. Kesmodel at his offices in the Medical Arts Building in Birmingham. Hotel reservations, however, should be made direct with the headquarters hotel, The Tutwiler, or with Hotel Molton or Hotel Redmont which are nearby.

The complete program follows:

Tuesday, February 21

11:00 to 12:30—*Cancer of the Pharynx, Hypopharynx and Larynx*—

Dr. Louis H. Clerf, Jefferson Medical College, Philadelphia.

12:30 to 1:45—Lunch.

2:00 to 3:30—*Cancer of the Breast*—

Dr. Frank Adair, Memorial Hospital, New York.

3:30 to 5:00—*Cancer of the Mouth*—

Dr. Oliver S. Moore, Memorial Hospital, New York.

7:00 p. m.—Dinner—Hotel Tutwiler.

8:30 p. m.—Address—

Dr. Charles S. Cameron, Jr., Medical and Scientific Director, the American Cancer Society, New York.

Wednesday, February 22

11:00 to 12:30—*Cancer of the Female Genital Organs*—

Dr. A. N. Arneson, Department of Gynecology, Barnard Free Skin & Cancer Hospital, St. Louis.

12:30 to 1:45—*Cancer of the Lung*—

Dr. William F. Reinhoff, Johns Hopkins Hospital, Baltimore.

3:30 to 5:00—*Cancer of the Colon and Rectum*—

Dr. Harry Bacon and/or Dr. Lloyd F. Sherman, Temple University Hospital and Medical School, Philadelphia.

8:00 to 9:30 p. m.—*Lymphoblastomas*—

Dr. Sidney Farber, The Children's Hospital, Boston.

Thursday, February 23

11:00 to 12:30—*Radiation Therapy of Cancer of the Pharynx and Larynx*—

Dr. Ralph W. Caulk, Garfield Memorial Hospital, Washington.

12:30 to 1:45—Lunch.

2:00 to 3:00—*Cancer of the Stomach*—

Dr. Alexander Brunschwig, Memorial Hospital, New York.

3:30 to 5:00—*Radiation Therapy of Lymphoblastomas*—

Dr. Ralph W. Caulk, Garfield Memorial Hospital, Washington.

POST-CLINICAL TOUR

The New Orleans Graduate Medical Assembly is sponsoring an interesting post-clinical tour to follow the 1950 meeting in New Orleans. On Saturday, March 11, a party composed of doctors and their wives will leave by plane for San Juan, Puerto Rico. The itinerary will also include the Virgin Islands; Ciudad Trujillo, Dominican Republic; Kingston and Montego Bay, Jamaica and Havana.

Medical programs and visits to hospitals have been arranged and the trip also includes a full schedule of sightseeing. World famous resort hotels are reserved for the group on the entire tour—to name a few, the Condado Beach Hotel in San Juan, Hotel Jaragua in Ciudad Trujillo, Myrtlebank and Tower Isle Hotels in Jamaica and the Hotel Nacional in Havana.

Departure from New Orleans will be on Saturday, March 11 and the party will return on Sunday, March 26.

Details and a complete itinerary are available at the office of the Assembly, Room 105, 1430 Tulane Avenue, New Orleans 12, Louisiana.

ASSOCIATION ITEMS

DR. HARRIS HONORED

The Southern Medical Association's Research Medal has been awarded Dr. Seale Harris of Birmingham for his original research in hyperinsulinism and for his work in nutrition, metabolism and diabetes mellitus. The presentation of the medal was made in Birmingham since Dr. Harris, who is recuperating from injuries, could not attend the Association's 43rd annual meeting held in Cincinnati in November.

The presentation was made by Dr. W. H. Anderson of Booneville, Miss., chairman of a committee named by Dr. Oscar B. Hunter, president.

"This medal, which is conferred in just recognition and appreciation, is a token of gold, symbolizing the virtues which characterize your life," Dr. Anderson said. "In mapping your life's course, you charted the unknown, climbed rugged heights, turned neither to the right nor to the left in devotion to your purpose."

TWO PAST PRESIDENTS DIE

Death claimed Dr. Lloyd Noland, Fairfield, on November 27, and within a few hours thereafter Dr. Charles A. Mohr of Mobile.

Dr. Noland, President of the Association in 1936-37 and for many years a member of the State Board of Censors, was an internationally known figure in the field of industrial medicine. At the time of his passing he was Superintendent of the Department of Health and Chief Surgeon of the Tennessee Coal, Iron and Railroad Company, in which capacity he had served since 1913.

Robert Gregg, president of T. C. I., made the following statement following Dr. Noland's death:

"I am sure I speak for all the thousands of employes of the Tennessee Coal, Iron and Railroad Company when I say that we are profoundly saddened by the death of Dr. Lloyd Noland.

"He not only was our doctor but our close friend. Not only did he minister to our illnesses but his warm friendly spirit always was a source of inspiration to those who worked with him and around him.

"I have been told—and I firmly believe—that Dr. Noland's amazing success in his vigorous and skilled attack on public health problems was of enormous benefit to this entire community.

"Dr. Noland was esteemed in the medical profession not alone here in the community of his residence but throughout the nation. His death is a grievous loss to his profession.

"For years and years to come, the results of Dr. Noland's service and leadership in this community will serve as a memorial to him."

Dr. Mohr, who served the Association as its President in 1925-26, was for many years Health Officer of the City and County of Mobile, having made, during his long connection in this capacity, many notable contributions to the field of preventive medicine and public health.

On November 29, 1949, the Mobile County Board of Health adopted the following resolution:

Whereas, The Lord in His wisdom has taken from among us at the wise and active age of 92 our colleague, fellow worker, and friend, Dr. Charles A. Mohr; and

Whereas, With supreme constancy, courage, and integrity, Dr. Mohr lived in service to his fellow man, loyalty to his friends, and love of good and constructive things, therefore be it

Resolved, That we honor him in his passing as we loved and venerated him in his life with us.

Prostatic Obstruction—In expert hands transurethral resection can be performed with little risk and excellent results, in the great majority of cases. It should not be used in cases complicated by urethral stricture, or when the gland is too large to be satisfactorily removed in less than an hour. The hypertrophied tissue should be removed down to the surgical capsule in all quadrants and the whole prostatic fossa should be left smooth. If this is not achieved, recurrence, persistent infection, continuation of symptoms and delayed hemorrhage are frequent aftermaths. Perineal prostatectomy can be performed with about the same mortality. However, because of the longer hospitalization required, and very frequent loss of sexual powers following this operation, it is usually reserved for glands thought to be too large to be handled satisfactorily in one sitting by transurethral resection, or to those cases in which early carcinoma is suspected. In these latter instances, perineal biopsy and frozen section signify immediately whether or not radical perineal prostatectomy should be carried out. Suprapubic prostatectomy in my practice is limited to those patients with extremely large prostates, particularly those chiefly intravesical in type, or enlarged glands with associated complications requiring opening of the bladder for their correction. Extensive prostatic calcification is treated best by subtotal perineal prostatectomy, which assures complete removal of the gland and all calcareous deposits.—*Prince, J. M. A. Georgia, Nov. '49.*

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

ANOTHER LOOK

W. A. Dozier, Jr.
Director of Public Relations

During the month of December many physicians, as well as other people, had an opportunity to talk with our Senators and Congressmen and to listen to the ideas these men hold concerning the situation in politics in Washington. Naturally each person was primarily interested in those proposed bills or propounded ideas which most nearly concerned his profession or occupation. However, the overall picture was and is also of importance to all.

As a part of this overall picture and one phase of the general trend stands the issue most pressing on physicians, the Administration's compulsory sickness insurance program. From speeches and from individual conversations it is found that there seems to be a definite analogy of thought expressed by all. Especially does this seem to be true on two points.

Almost to a man, our representatives expressed the idea that they do not favor state medicine; but if the battle is to be won against those who are making such an effort to federalize medicine, the profession must propose and solidly back a positive plan to strengthen the weak spots in our present system. Senator Hill's Voluntary Insurance Bill was one positive plan mentioned by several. Some of the Congressmen said it looked like a good answer to them. Others frankly asked the profession what it thinks of this proposal. Senator Hill stated that the bill is not in final form and that work continues on it. It certainly behooves the leaders in the field of health and medical care to offer constructive criticism of this proposal. It seems likely that some type of legislation along these lines is in the offing, and those who are to work closest under any such plan should be sure that the plan is the most workable possible.

The second point emphasized by practically all was the necessity for physicians to take a more active part in civic affairs. By

civic affairs many of them included politics, and practically all of them emphasized the necessity of activity on the local, state, and federal levels. By education, ability, and standing in the community the physicians are and should be leaders. However, not enough assume the burden of this leadership.

Both of these above points have been heard before and have been reported before. Where the ideas began or how they took hold are not a part of this article. The important thing at present is the analogous thinking on the parts of our national representatives. They, as well as the public, are stating what they think to be necessary.

Prostatic Carcinoma—Careful selection of cases suitable for the radical operation is essential if morbidity and mortality are to be avoided and satisfactory postoperative results obtained. Certain criteria must be emphasized although they may be somewhat elastic. First, the obvious malignant induration must not extend beyond the capsule of the gland into the membranous urethra, or extensively involve the fascia around the seminal vesicles, and the whole gland must be freely movable. Second, there must be no demonstrable metastases, either on physical examination or more particularly by x-ray studies, and the acid phosphatase determination should be within normal limits. Third, the patient should be a good surgical risk and, most important, his life expectancy must be good.

This latter point, we feel, is of paramount importance. Prostatic cancer is a slowly progressing disease in most cases and we cannot condemn too strongly the performance of the procedure in an elderly person whose life expectancy is obviously limited. In older individuals, generally speaking, muscle tone is to some degree at least impaired and the functional results following the operation will never be as satisfactory as when the procedure is carried out on younger men, more robust, and with good muscle tone. The criticisms which have been directed at the radical operation, emphasizing unsatisfactory postoperative results, we feel are largely due to results in cases which should never have been subjected to the procedure. From the foregoing it has therefore been our custom to reserve the radical operation for those patients under seventy years, but the rule is by no means didactic as exceptions will always be found on either side of this limit.—Colston, *New Orleans M. & S. J.*, Nov. '49.

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

CIVIC RESPONSIBILITY

Right now, when Auxiliary members are so concerned with the trend of our Government towards socialism it would seem our attention should be called to the fact that we are not by ourselves in fighting issues. Let us look on the views of one of America's great leaders, Mr. Earl Bunting, Managing Director of the National Association of Manufacturers, and let us review in part his recent address before the Chattanooga Manufacturers Association:

It seems to me that, of all the leaders in American communities, the businessman bears the greatest responsibility for building freedom from the ground up—building good national government out of good local government.

Too many Americans want their government to build homes for them, pay their doctor and hospital bills, and generally guarantee their needs from the cradle to the grave. Some Americans want the government to lower prices of the things they buy. Others want the government to raise prices of the things they sell. Too many Americans want the government to fix the wages and hours of all employees, and to provide for those who don't like the kind of employment they can obtain.

In brief, many people want the government to support them with funds obtained by taxing away the livelihood and opportunities of the vast majority of Americans who prefer to earn their own living and lead their own lives.

Every good citizen is in favor of prosperity, security, health, good housing, and plenty of job opportunities. But it is the citizens—not their government—who create, who produce, who earn these most desirable things. Thoughtful Americans are opposed to promises that government will provide these things for everyone. They are opposed to such promises because they are false—because they cannot be kept—because government is a consumer, not a producer. Taxes that confiscate incentives also confiscate the American people's means to prosper and build security. There are those who say that government can always borrow money. These economic assassins pretend that government can go on borrowing and printing money indefinitely without ever reaching the same day of reckoning that individuals reach when they borrow far beyond their capacity to pay.

If the government supports everybody, then who will support the government? Big government has definitely bulged over into the economic life of this nation. And I think that the public

interest, the effective defense of the American people's freedom where it is most threatened today, will be best served by forthright, businesslike leadership in civic affairs where people live. Every citizen shares this responsibility with the individual business man. There is no monopoly on civic leadership. But there are times when I fear that many businessmen feel they are expected to take only the most passive part in civic life.

True, effective American leadership is not and never was passive. What true liberals once achieved, true liberals are fighting to conserve today. And the freedom which was once wrested from the tyranny of kings is now in England and elsewhere, tyrannized and taxed within an inch of its life by a new socialized force of reaction disguised as the "welfare state." The powerful few in the Kremlin never fail to cloak their most arbitrary abuses in the name of public welfare and necessity. This is the pattern for all dictatorships. What is happening in America is what has already happened in England. There has been no lack, there will be no lack, of excuses and crises if the advocates of super-government have their way. In the last analysis it takes nothing short of regimentation to make controls get even half way to first base, and they know it. American business is the most competitive on earth, and we look to the government to enforce the laws regarding fair competitive practices. What we do not look to government for is the pretense that small business should be penalized and liquidated for growing big through rendering increasing service. What we do not look to government for is its repeated attacks on the freedom to be enterprising, productive or successful. Frankly I think that the limitation of economic freedom is in no small measure due to the fact that too many businessmen take this constant interference without making it their business to arouse their own communities to an understanding of what this means to all Americans and to their freedom. This is not, this never could be, the issue of one political party. Two months ago former President Hoover declared that most Americans do not realize that our nation is blissfully driving down a back road at top speed on "the last mile of collectivism." From the other great political party, former Secretary of State James F. Byrnes said this summer: "We are going down the road to statism. Where we will wind up, no one can tell, but if some of the new programs seriously proposed should be adopted, there is danger that the individual—whether farmer, worker, manufacturer, lawyer or doctor—will soon be an economic slave pulling an oar in the galley of the state."

If you, if every businessman does not now make it his personal responsibility to lead, where

informed, responsible leadership counts most, where you live and where the American people live and earn their living, it is you, your fellow citizens, your fellow workers in the factory and the office who will all pull their hearts out on the medieval oars of an impersonal, slave-propelled ship of state. It used to be called "Serfdom." Now it is called "Welfare."

As a citizen and as a businessman, I believe that every manufacturer, every member of industrial management whether foreman or factory head, and every business man from the Gulf to the Great Lakes has a special responsibility to his own community. He owes it every ounce of leadership he possesses or can develop. He owes this forthright leadership in the field of public affairs as well as economics.

There is absolutely no getting away from the fact that security must be earned by the people. If we don't provide our own security out of our own savings, the only possible alternative is that others have to work that much harder to foot the bill. This means that certain, special, selfish groups are being provided special privileges and personal benefits at the expense of all the people. It is this abuse of the American people, this downhill and dishonest tobogganing of big government and its henchmen, that we forthrightly reject. Those who are leading the downhill run into the bottomless pit of power concentrated in a few political hands are doing an always energetic and frequently effective job of breaking down the freedom of every individual. What are you, the individual businessmen of America, doing to defend freedom from that attack? The front line of the battle for freedom—for individual rights, for personal, responsible action—today lies in good civic leadership throughout every American community. It lies squarely at your doorstep. America needs you, and all that you have to give this top-fling job.

MEMBERS-AT-LARGE

Mrs. Harold F. Wahlquist, Chairman of Organization of the Woman's Auxiliary to the American Medical Association, when speaking before the recent Auxiliary convention in Chicago, stressed that, to be effective, organizations must continually strive for achievement. Each individual must feel she plays a very important part in the work of the organization. The people in an organization are the dynamic force behind it.

The need for counties to be organized, and with a hundred per cent membership if possible, is important. However, of no less importance is the need for more members-at-large. That these persons in outlying districts where there are no County Medical Societies and consequently no Woman's Auxiliaries become associated with the state

organization as members-at-large is even more urgent. Through this association they can become more adequately trained to shoulder their responsibility every doctor's wife in our nation today should equip herself for. One person, one group or several groups can not possibly do the work that needs to be done at this time. It takes every woman who is privileged to be the wife of a doctor to be united in standing as a solid front against any form of government that could take away the individual rights of our professional men.

AUXILIARY OBJECTIVES

Auxiliary member, is your Auxiliary purely social because you so thoroughly enjoy being in each other's company? If so, you will probably find your Auxiliary is not 100 per cent in its membership. Where some ladies seem to enjoy only the social part of your meetings, you will find there are those who have no time to give strictly social meetings a place in their busy-day lives. These ladies would make excellent members, and your programs should by all means be made interesting for them. Don't let your Auxiliary continue to be just social. It is wonderful that you enjoy the company of each other to such an extent, but there is so very much more to be done at this time. Give over a portion of your program to study. Nothing is more satisfying than to know that you, through study, are mentally able to deal with the issues arising today. It is the duty of the presidents and officers of all organizations to steer their groups in the proper direction. It is regrettable to note that, generally speaking, the trend of the nation is to let the Government look after first one thing and then another without individuals giving too much thought or concern as to the ultimate outcome. We must not continue down this road, "letting John do it"—in this instance John being the Government. We owe it to the coming generation to keep our country free, free from the centralization of power which will in the last analysis become dictatorship, taking from us the right to think and work as free men. Don't let this happen here. Equip yourselves through study. If your auxiliary does not include study in its program, you are passing up the most important work you can do today. If your Auxiliary does not

near the hundred per cent mark in membership, analyze your program, and do something about it.

IS YOUR COUNTY AUXILIARY STRONG?

This is a question that each Auxiliary should constantly have before it. We can accomplish what is expected of us by the County Medical Society only if we are strong. There are eight definite points we should ever keep before us, if we are to be considered strong.

1. Hold meetings as regularly as possible.
2. Keep programs activated, with many participating.
3. Work constructively and diligently to maintain membership interest.
4. Feature new members.
5. Hold occasional joint meetings with the County Medical Society. Have fun together.
6. Show the county how it fits into the whole national organization.
7. Portray to county members a complete concept of the national and state programs.
8. Make members feel the importance of their membership by convincing them it is our combined efforts that will assure laity we are qualified leaders in health.

An Auxiliary is just as strong as its membership. The old adage, "A chain is as strong as its weakest link," could certainly apply to our Auxiliary. So it is with this thought that one of our members might be that weak link, that our thoughts turn to what constitutes a good member.

1. Attend your Auxiliary meetings regularly. Let no shallow alibi keep you away.
2. Participate in Auxiliary activities. Say "yes" when asked to serve.
3. Ask yourself as a member, What can I contribute? Maybe you can't be a speaker but few are the ladies who can't do a pretty good job of talking when not standing before a group on a platform.
4. Learn to know others; be friendly; seek new friendships. In doing this, you will find no time for unkind words and acts.
5. Enroll a member. If our organization is to have weight, we must have a near if not a complete 100 per cent enrollment.
6. Appreciate your privilege. Others would enjoy what you regard as unimportant. Others would fight to the end to protect what has been given you.

7. Activate people in your community to an appreciation of American Medicine and our system of free enterprise. Contact your neighbors, club friends, business associates, church members. You will not be afraid to talk about anything if you know that you know what you are talking about.

LOOKING INTO LEGISLATION

In the December issue of the National Parent-Teacher's Magazine there are two paragraphs in an article written by Ethel G. Brown to which we want to call attention.

The Local Public Health Units Act was passed by the Senate (S. 522) but not acted upon in the House, where a similar bill has been drafted in committee (H. R. 5865). These bills would provide federal funds to assist the states in the development and maintenance of full-time local health units, enabling them to supply the basic public health services: maternal and child health, sanitation, communicable disease control, laboratory services, vital statistics, and health education. The funds would be allotted on the basis of population and financial need of the state.

Forty million Americans have no protection whatsoever by organized public health departments. One fifth of the hundred and two million persons living in communities that have a public health organization structure are unprotected because there is no health officer. In still other communities these positions are unfilled or not set up. With a district organization large enough to take care of fifty thousand persons—it might serve a combination of counties—minimum basic services can be supplied for approximately \$1.50 per person per year. Find out about your own county health service. Be prepared to tell your Congressman whether or not your state has legislation that will permit receipt of federal funds when the Local Public Health Units Act is passed. Be sure to tell him that this is not a plan for "Socialized Medicine" but a noncontroversial proposal that enjoys the support of both lay and professional groups.

It will be well for Auxiliary members to be informed on this Local Health Units Act, and all acts pertaining to the health of our nation.

NURSE RECRUITMENT

Mrs. Leo J. Schaefer, National Program Chairman of the Auxiliary to the American Medical Association, urged that Auxiliaries throughout the nation please not let up in their efforts to recruit nurses. As has been pointed out to the public by doctors, dentists, hospitals and Nurses' Associations, there is an ever-growing demand for more and more

nurses. Too few young women are making nursing their profession, and the shortage is becoming acute. Mrs. Schaefer urged that every effort be made to make young girls want to make nursing their profession. Surely the story of Florence Nightingale should awaken in many a young girl's heart the desire to pattern her life after so great a humanitarian, whose light of her life shall always stand as a beacon to guide others in her footsteps.

No career could be more satisfying to a person wishing to make her life one of service to mankind. What greater joy could possibly come to one than the joy of knowing that her gentle nursing care had brought back health and happiness to poor suffering humanity? What greater reward could a person have than the look in her patient's eyes and those of his loved ones when a crisis has been reached and the doctor says your patient will live, when the nurse knows that through her kindness, training and skill she held the balance of life and death in her hands? What other training could a young girl possibly decide upon that could better equip her for health and happiness of herself and family for the balance of their lives? The contacts made in nursing are those of the highest quality, and with those of the highest intellect. You have but to list the doctors in your community who have married Ladies in White to see living proof of this fact.

There is no end to the opportunities presented to the good nurse, and advancement to the highest level in her profession is surely hers if this is her goal. Becoming a nurse, with the many years of discipline and training, is not an easy job. Nothing worth while in life comes easy. If the mere desire to make money in the quickest way with the least amount of effort is a young woman's only thought, then she does not have in her the qualities of a nurse. If, on the other hand, a young person wants, more than anything else to become someone worth while, commanding the greatest respect due one of her profession, if living a life of service to God and humanity, gaining for herself the great satisfaction of giving to those who need her most her very self in service, then nursing, with all its joys, hard work and, yes, sometimes its sorrow, fills the bill.

MONTGOMERY COUNTY UNIT

As a direct result of Mr. W. A. Dozier's proposed program that the study of legislation be of paramount importance this year, it was decided by Mrs. H. L. Rosen, President of the Montgomery County Auxiliary, and Legislation Chairman Mrs. Henry C. Collins that all phases of legislation be carefully studied during the year, with members of the Auxiliary presenting and conducting this study group. It was in accordance with their schedule that, in November, after Mr. Dozier discussed in detail Title VII of Bill S. 1679, that Mrs. W. T. Brannon gave a most interesting paper on "Free Medicine and What It Would Cost in This Country." Mrs. Brannon pointed out the part government is already playing in medical care. The following are a few of the facts as presented in her paper. There are 44 separate Federal agencies now dealing with health and medicine. One out of every six persons in the United States received medical aid from the government in 1948. In 1940 government agencies spent 250 million dollars on medical services, whereas in 1948 this was increased to one billion 250 million dollars. Parallel hospital systems are being expanded rapidly with no coordination by the Veteran's Administration, Public Health Service, the Army, the Navy, and the Air Forces. As examples of the waste found in overlapping health services: San Francisco has a total of thirteen Service hospitals. Seven could be closed, but more are being built. In New Orleans, five Federal hospitals with duplication of medical services are used to only slightly more than fifty per cent of capacity. In San Diego, of the ten Federal hospitals, nine could be closed with the large Navy hospital accommodating the patient load. Nationally, military hospitals have a capacity of 21,555 beds though total patients number only 7,800. Federal hospitals are built at considerably higher cost than that of private hospitals; private hospitals costing about \$16,000 a bed against from \$20,000 to \$30,000 for government hospitals. One Veterans Administration hospital soared to \$51,000 per bed. The time spent in hospitals follows the same double standard, raising per patient costs further. The time a patient spends in a private hospital is an average of seven days, whereas, for the same ailment,

he will spend seventeen days in a county hospital and thirty days in a Federal hospital.

What is proposed in Bill S. 1679 is a new government superstructure to coordinate all government medical care, plus a program of health insurance for everybody. Such a program could cost three billion dollars or more yearly. The set-up calls for a national health board of 5 members at \$12,000 a year each; and an advisory council consisting of chairman and 716 members, 48 state boards, not to mention local area boards, and most probably a board for each of the 3,070 counties in the United States. The bill clearly recognizes the magnitude of the cost of the program, providing for an appropriation of three hundred million dollars for maintenance and operation in 1952. Federal, state and local taxes in the United States already total thirty per cent of our national income, or, wording it differently, the American people already devote one-third of their working time to supporting government, and should this bill be passed the American wage earners will be working one-half of their time to support their government. So it would seem that Free Medicine, which costs the wage earners an amount equal to fifty per cent of their wages, is indeed not free at all.

A special meeting was held in December when the following members presented papers: Mrs. E. J. Kocour discussed the Oscar Ewing Report and gave an analysis of this program. Mrs. Wm. L. Smith—The Conclusion of the Planning Committee after Discussion in Medical Section of National Health Assembly. Mrs. Irl Long—Medical Ethics and Public Relations. Mrs. J. H. Farrior—Progress of Medicine in Alabama and the Program for Good Health.

In January Mrs. J. M. Barnes will present "Training for Medical Service and the Problem of Extending the Service to More People." Mrs. Fred D. Reynolds will discuss the Blue Cross-Blue Shield Plan of Hospital-Surgical Insurance.

ANNUAL MEETING OF THE
ASSOCIATION
THOMAS JEFFERSON HOTEL
BIRMINGHAM
APRIL 20-22

THE MEDICAL COLLEGE OF ALABAMA

OPERATION OF THE U. S. PUBLIC HEALTH SERVICE UNDERGRADUATE CANCER TEACHING PROGRAM UNDER GRANT TO THE MEDICAL COLLEGE

October 1, 1948-September 30, 1949

The conduct of this program was placed in the hands of an Undergraduate Cancer Teaching Committee consisting of surgeon, radiologist, and pathologist. The pathologist was coordinator of the teaching program, the radiologist director of the tumor clinic.

The plan during the first year of operation was that of support of the existing tumor clinic activities, the desire being to attract more staff men to the clinic to help with its work. To this end small salaries were paid to members of various departments, on the advice of the departmental heads. Some of these were volunteer clinical teachers, others more nearly full time. More was given to the Department of Radiology than to the other departments since the running of the clinic was largely in the hands of this department.

This step resulted in a very considerable influx of consultants into the work of the tumor clinic, consultants in surgery, internal medicine, gynecology, and pathology, and added considerably to the teaching potentialities of the clinic. The Pathology Department began showing slides of biopsies of patients, which had not been done previously. More complete physical examinations were made possible.

The grant made possible a second development, namely, the photographing of patients in the tumor clinic. This has been of great value in providing a record, but also of great value in building up sets of kodachrome slides for use in the teaching of cancer.

The tumor clinic operates two afternoons a week. Most of the patients are referred in directly to the tumor clinic, and many are state-aid tumor patients referred by their physicians via the State Health Department. These patients were examined in the tumor clinic. Biopsies were taken when indicated. Brief notes were dictated on each case for purposes of record and follow-up. Consultation was entirely informal. The tumors on the Tuesday afternoon session were of the

skin, buccal cavity, breast, bone, and of all types, except gynecologic. The Thursday afternoon session was largely given over to gynecologic cases, with groups of students assigned to each case. In both sessions students participated in the work-up of cases. Biopsies were made in the tumor clinic by a house officer from the Department of Surgery. Studies in exfoliative cytology were made.

A cancer conference was inaugurated for the first time. This occurred weekly at noon on Wednesday, January through May. At this conference patients from the tumor clinic and occasionally from the wards were presented to the fourth-year medical students, usually three or four patients per conference, and the nature, diagnosis, and treatment of the neoplastic disease were discussed by the consultants in attendance, chiefly representatives of the Departments of Radiology and Pathology, but also representatives of the Department of Surgery. Certain conferences were turned over to the Department of Gynecology and the Department of Urology for special instruction in these fields. One conference on radium therapy by the Radiology Department, one on exfoliative cytology by the Pathology Department, and one on state assistance of cancer patients by the State Health Officer and the State Health Office's Administrator of Cancer Activities were held. Several of the items in this conference course were suggested by the students who were consulted on the matter, and it was possible to supply deficiencies in cancer teaching in this fashion.

PROGRAM OF CANCER CONFERENCE FOR
SENIOR MEDICAL STUDENTS

Medical College of Alabama

Wednesday, 12:00 Noon

January through May 1949

- Jan. 5, Malignant Melanoma, Presentation of cases.
- Jan. 12, Carcinoma of Breast, and of Face. Presentation of cases.
- Jan. 19, Visit to Radiology Department. Demonstration of radiation therapy in cancer cases.
- Jan. 26, Tumor of Oral Cavity. Presentation of cases.
- Feb. 2, Carcinoma of Upper Extremities. Presentation of cases.
- Feb. 9, Salivary gland tumors. Presentation of cases.

- Feb. 16, Carcinoma in Chronic Ulceration of Skin; Presentation of cases. Carcinoma of Hypopharynx.
- Feb. 23, Giant-Cell Tumors of Bone. Presentation of cases.
- Mar. 2, Carcinoma of Vulva. Presentation of cases.
- Mar. 16, Blood Tests for Syphilis. Dr. Joseph Cline.
- Mar. 23, Patients from Tumor Clinic. Presentation of cases.
- Mar. 30, Lecture on Exfoliative Cytology. Dr. Joseph Cunningham.
- Apr. 6, Patients from Tumor Clinic. Presentation of cases.
- Apr. 13, Gynecologic Cancer. Dr. W. N. Jones.
- Apr. 20, Patients from Tumor Clinic. Presentation of cases.
- Apr. 27, Genito-Urinary Tract Cancer. Dr. Bruno Barelare.
- May 4, The Alabama State Health Department Program. Dr. D. G. Gill and Dr. W. H. Y. Smith.
- May 11, Patients from Tumor Clinic. Presentation of cases.
- May 18, Carcinoma of Lung. Dr. Howard Holley.

In those sessions in which patients were presented, discussion was carried on by members of the Departments of Radiology, Pathology, and Surgery. A consultant from the Dental School was present on occasion.

In addition to support of tumor clinic activities and the new cancer conferences, funds were spent for equipment in several departments to improve undergraduate cancer teaching. Projection equipment, much needed, was secured, photographic supplies were obtained, and the new film on cancer was bought.

The program as outlined served to direct the senior student's attention to the problem of cancer shortly before graduation. It served to make him "cancer-conscious." This "vertical" teaching of the subject of cancer was a supplement to the "horizontal teaching" of cancer which proceeded, as before, in the various departments of the Medical College.

Tuberculosis rates are, it is agreed, among the most important indices of the state of the public health.—*The Right Hon. Walter Elliott, F. R. C. P., M. P., Brit. M. J., August 6, 1949.*

In the entire United States about 270,000 mental patients are coming back into the community each year. The spread of the disease from those who may have contracted tuberculosis while in mental hospitals therefore becomes a community problem which we cannot afford to ignore.—*Pub. Health Rep., Jan. 7, 1949.*

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

HEALTH AND OLD AGE

Just before the outbreak of the War Between the States, approximately one American out of every seven and a half (13.1 per cent) was 45 years of age or older. About one out every 37 (2.7 per cent) was 65 years of age or older. In 1880 about 16 per cent of our ancestors were 45 or older and 3.4 per cent were 65 or older. At the turn of the century 17.8 per cent were 45 or older, and 4.1 per cent were at least 65. By 1920 the ratio of those 45 and older to the total population had increased to 20.8 per cent (slightly more than a fifth). Those 65 and over in 1920 represented 4.7 per cent of the whole population. In 1940, 26.5 per cent (more than a fourth) were at least 45, and 6.8 per cent were at least 65. We do not know what the 1950 census will show of course. But it is anticipated that by 1960, only a decade off, a third of us who are then living will have reached the mid-forties. A tenth of us will have reached the mid-sixties. Looking still farther ahead, prognosticators tell us what we may expect in 1980. At that time, they say, 40.3 per cent of the American people will be at least 45 years of age, and 14.4 per cent will never see 64 again.

These percentages tell an impressive story. They tell us that the ratio of Americans 45 years of age and older more than doubled between the year Abraham Lincoln was elected President and the year Franklin D. Roosevelt was elected for the third time. During the same 80-year span, the ratio of those 65 years old and older increased more than 150 per cent. On the basis of conservative estimates as to what the future will bring, we may expect between 1940 and 1960 an increase of more than a fourth in the ratio of those 45 and older. An increase of about 52 per cent in that ratio is expected between 1940 and 1980. As for the oldsters, there is expected to be an increase in those 65 and over of about 47 per cent between 1940 and 1960. Between 1940 and 1980 that

increase is expected to amount to 112 per cent.

But let us take an even broader look, from 1860 to 1980. During that 120-year span, the ratio of Americans 45 years of age and older to total population is expected to have increased 207 per cent. The ratio of those 65 years of age and older is expected to have increased during the same period by 433 per cent. These two statements mean simply this: There will probably be more than three times as many Americans 45 and over in 1980 in proportion to population as there were in 1860. There are expected to be more than five times as many people who have reached their 65th birthdays.

If you have kept up with medical progress in recent decades, you do not need to be told why this is so. It is a product of the remarkable success that has been made in mastering mankind's great disease enemies. We have literally slashed the death rates for a considerable number of them. Diphtheria, whooping cough, scarlet fever, summer diarrheas and practically all of the other diseases of infancy and early childhood are being held in check. A few could virtually be wiped out, if the preventive measures now available were used universally. Thanks to that progress, an increasingly smaller proportion of babies have been dying in recent decades. There has ceased to be any support for the old-time assertion that a woman had to have three babies in order to "raise" one. If she has three babies and if they receive proper medical care and supervision, she has good reason to hope she will "raise" three. We do not need to say of American mothers, as it is said of Chinese mothers, that they hardly dare call their babies their own until they are a year old: There is such a slight chance that they will have them any longer than a year.

We have also taken some heavy licks at the disease enemies of childhood and youth. We are using the sulfa drugs, penicillin and other products known generally as "the miracle drugs" against pneumonia and other illnesses that strike with special force among the young, eager and ambitious. And we are

using them effectively. Innumerable lives are being saved every year in that age group.

Nor has medical science been dilatory or unsuccessful in its efforts to protect those who have passed out of their teen's. They too have received powerful weapons of defense against their ancient and new disease enemies. Perhaps the gains made in that field are not as spectacular as those made in protecting infants and children. But they have been notable. And they have given the gift of continued life to many, many people, both men and women.

All of these are medical achievements of the first order. The medical profession and the public health agencies are proud of them. Humanity at large is their debtor. Thanks to these everyday medical miracles, the proportion of our people who fail to survive those early years is being gradually reduced. By the same token, the proportion of those who do survive is becoming larger and larger. That is the simple explanation of the changing ratios of older people which were discussed at the outset of this paper.

As gratifying as it is that more people are delaying their encounters with the gentleman with the long white beard and the scythe, that changed and changing situation has brought some serious problems. They are challenging the best thought of our leaders. We must not take them too lightly. The prospect of sixty million Americans 45 years of age and older by 1980 throws a shadow across many thresholds. The outlook for twenty-one million 65 and older about thirty years from now is something to think about.

This problem's implications are not limited to the health field of course. They extend to practically every field. But they are a particular challenge to health workers. It is somewhat ironical that those who, with the best of intentions in the world, created that problem find themselves charged with much of the responsibility for dealing with it. But they are not alone.

The swelling importance of our older people in the broad health picture has given rise to a comparatively new science. Or perhaps it would be more correct to say that it has given vastly greater importance to an old science. That is the science of geriatrics, or the treatment of the diseases and condi-

tions peculiar to older people. You will be hearing more and more about it from now on. You may be greatly indebted to it personally before you die.

It has long been known of course that the aging process brings definite pathologic changes in people. Hippocrates, Father of Medicine, called attention to them. He even listed a number of diseases which he considered particularly prevalent among the aged. Among them, according to Dr. Malford W. Thewlis, special consultant of the Rhode Island Department of Public Health, were these: catarrh accompanied by cough, pains in the joints, nephritis (Bright's disease), vertigo, apoplexy and partial or complete loss of sight and hearing. Dr. Thewlis also tells us in his book, *The Care of the Aged (Geriatrics)*, that Hippocrates was of the opinion that the old had fewer complaints than the young. However, the ancient man of medicine is quoted as declaring, "those chronic diseases which do befall them (the old) generally never leave them."

The term "geriatrics" is said to have been used for the first time by Dr. I. L. Nascher. The place of its supposed first use was an article in the *New York Medical Journal* of August 21, 1909.

Mental state has much to do with physical feelings. It is natural, therefore, that many elderly people develop conditions close to physical illness because they are not happy. They often have a feeling that they have lived beyond their usefulness. They are oppressed by a sense of economic dependency. They usually have a great deal of leisure, however unwelcome it may be, and that gives them an unusually favorable opportunity to brood. They are depressed by the belief that they are no longer able to make any worth while contributions to society.

But in that they are mistaken. It is true, physical strength is usually diminished in old age. But the mind and spirit may remain young, alert and enthusiastic. And, out of that alertness, enthusiasm and ageless youth that refuses to bow to the years may come many worth while achievements in many fields. Age and uselessness are not necessarily synonymous.

Do you wish reminders that this is true? You need only to study the world's great literature. Read the biographies of its greatest men and women. Familiarize yourself

with the lives of those who have carried priceless light into dark and dreary places. You will find that many of them were well past middle age when they accomplished their most valuable work. Dr. Thewlis tells us about a few of them in the book which has already been mentioned:

"Goethe worked until he was past 80, his intellect unimpaired, and wrote some of his finest poems when he was past his seventy-fifth birthday. Herbert Spencer, who died at work at the age of 83, had a nervous breakdown several years before his death which made him practically an invalid. Although there were times when he could write only a few paragraphs a day, he finally mastered his affliction and became articulate once more.

"Sir Joseph Hooker, botanist, worked when he was past 80. Macaulay was 48 when he issued the first and second volumes of his *History of England*, but the third and fourth volumes did not appear until he was 55 years of age.

"Darwin did not establish his reputation until he had passed 50; he wrote *Descent of Man* at the age of 62. Humboldt's greatest works were produced after three-score years, and one of his most important works was not completed until he was 80 years old."

Many others have achieved greatly after reaching old age. They include Thomas Carlyle, Oliver Wendell Holmes, father and son, Henry Wadsworth Longfellow, William Cullen Bryant (who also got an early start by writing a famous poem at 17), Edward Everett Hale, Horace Greeley, Charles A. Dana (like Greeley, a famous newspaper editor), Gladstone, Ralph Waldo Emerson, Admiral Dewey, Charles W. Eliot, Harvard's most famous president, Dr. William H. Welch, Arturo Toscanini (who recently began a new musical season at the age of 82), Thomas A. Edison, Dr. Nicholas Murray Butler, Winston Churchill, Connie Mack—the list is all but endless.

Our older people need help to continue to stay well and remain fairly happy and contented. We need them for what they can do for our own health and happiness. The problem of finding jobs for them is a problem for the industrialists and economists. The problem of keeping them fit and able to work is a responsibility of medicine and public health.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

TESTS FOR VIRUS AND RICKETTSIA

The various Branch Laboratories and especially the Central Laboratory at Mont-

gomery are in constant receipt of specimens for identification of one or another virus. None of these tests is made in any of our Health Department Laboratories. Since specimens of this nature are easily ruined by delay, much serious trouble is thus caused. It becomes necessary to write the sender, ascertain if he wishes the specimen forwarded to the proper laboratory or inform him that his specimen is unsatisfactory for the requested test. Delays like these often result in temporary or permanent disappearance of the suspected virus and, so, further complicate the situation. Faulty methods of collection, packing and shipping are often responsible.

The National Institute of Health has just issued a pamphlet of information which gives instructions which every physician should know. Since these are not available for general distribution, the most pertinent instructions are herewith reproduced.

All available rickettsial and virus tests are listed with the laboratories where they are made.

Note: Do not send to any of these laboratories tests that are routine in our State Laboratories. Such routine tests will not be made in these three virus and rickettsial laboratories so this procedure will only result in needless correspondence and delays.

PREPARATION AND SHIPMENT OF VIRAL AND RICKETTSIAL DIAGNOSTIC SPECIMENS

1. Type of Specimen to Be Collected:

a. *Virus isolation*—Materials for isolation must be freshly obtained and if possible collected under sterile conditions. Source of materials depends on type of clinical disease (nasal washings or sputa in respiratory infections, etc.). Usual materials include blood, spinal fluid, nasal washings, sputum, effusion fluid, tissue biopsies, or lesion scrapings. No preservative or fixative should be added. Blood for virus isolation should be heparinized or defibrinated.

b. *Serological tests*—Serum is to be obtained from clotted blood collected and kept under sterile conditions. Serum separated from clot at source prevents hemolysis which interferes with some tests. At least 20 cc. of blood (10 cc. of serum) should be collected for serological tests.

2. Time to Collect Specimens:

a. *Virus isolation*—The time in the course of the clinical disease at which specimens are

collected is of utmost importance. In general for isolation technics, the earlier in the acute stage the better. Certainly the specimen should be taken while patient is still acutely ill and febrile.

b. *Serological tests*—Serum specimens must be paired since only a rise in antibody titer is positive evidence. The first sample should be collected as early in the illness as possible and the second from 2 to 8 weeks after convalescence. The best method is a series of samples: acute, 2, 4, and 8 weeks convalescent.

3. Container for Specimen:

a. *Virus isolation*—Materials for virus isolation must be frozen if it will take longer than a few hours to get them to the laboratory. This requires dry ice. Dry ice releases CO₂ gas which is deleterious to most viruses; therefore these specimens must be completely sealed off (flame-sealed ampoules for fluid specimens). In the case of tissue samples placed in bottles closed with tightly fitting rubber stoppers, the tops should be sealed over with paraffin. If facilities for freezing tissue specimens are not available, place tissue in 50% buffered glycerine.

b. *Serological tests*—The type of container must protect the specimen from loss by breakage as well as from contamination and deterioration. Serum samples in test tubes with tight rubber stoppers (reinforced by adhesive tape) or leakproof screw top vials are satisfactory.

4. Packing and Shipping of Specimens:

a. *Virus isolation*—Virus isolation samples once ampouled should be quickly frozen (on dry ice) and kept frozen at -10° C. or lower until shipped. For safety purposes in the event of breakage of sealed containers, it is best to wrap the container in gauze soaked in a 4% solution of formaldehyde.

Packaging requires placing the specimen directly against at least 2 pounds of dry ice (amount of ice depending on distance to be shipped) in the center of box large enough for 6 inches of insulating material (paper, cotton, etc.) to surround it. Shipment should be by air express, and the laboratory should be notified by wire of flight number, time of arrival, and waybill number. Whenever possible, specimens should be shipped so that they will arrive at the laboratory during the working day and not on week ends.

b. *Serological tests*—Serum samples for serological tests may be shipped by parcel post in mailing containers with tubes protected by cotton.

5. Data to be Supplied with Specimen:

- Name of patient.
- Age.
- Summary of pertinent history, physical findings, and clinical laboratory tests with dates.
- Type of material being submitted and date collected.
- Virus disease being suspected.

INTERPRETATION OF LABORATORY RESULTS

1. *Virus Isolation*—Negative results of attempts to isolate a specific virus from specimens do not rule out this particular agent as the possible cause of the illness in question.

2. *Serological Tests*—Since it has been found that some individuals already have serum antibodies against certain viruses because of previous contact with that virus, the finding of antibodies in a single sample taken during or after a particular illness does not prove the etiology of that illness. However, a definite rise in titer of antibodies from the acute stage to convalescence is usually significant.

Many of these tests are time consuming and costly. Do not request them without reasonable justification.

TYPE OF TEST AND WHERE AVAILABLE

DISEASES	TYPE OF TEST AVAILABLE	WHERE TEST IS AVAILABLE (Numbers refer to Laboratories listed at end of this Chart)
RICKETTSIAL INFECTIONS		
Typhus, endemic	Complement fixation test	1
Typhus, epidemic	Complement fixation test	1
Rocky Mountain spotted fever	Complement fixation test	1
Q fever	Complement fixation test	1
Rickettsialpox	Complement fixation test	1

VIRUS INFECTIONS

Lymphogranuloma venereum	Complement fixation test	1 and 3
Psittacosis	Isolation of virus	3
	Complement fixation test	1 and 3
Rabies	Isolation of virus	State Health Department Laboratories and 3
	Brain tissue examination	
Poliomyelitis	Isolation of virus	3 (by special request)
Encephalitis	Neutralization test	
	Isolation of virus	3
	Complement fixation test	
Herpes	Isolation of virus	2 and 3
	Neutralization test	
Influenza	Isolation of virus RBC agglutination inhibition test	Influenza Diagnostic Centers and 3
Measles	none	-
Mumps	Complement fixation test	2 and 3
Smallpox	Isolation of virus	2 and 3
Vaccinia	Isolation of virus	3
Infectious hepatitis	none	
Infectious mononucleosis	Heterophile agglutination test	2 (by special request) and 1
Colorado tick fever	Isolation of virus	3

OTHER SUSPECTED VIRUS OR RICKETTSIAL INFECTIONS

Other unusual febrile or infectious diseases in which virus or rickettsial etiology is suspected	Isolation of etiological organism	2 and 3
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Addresses of Laboratories listed above:

1. U. S. Public Health Service Communicable Disease Center Immunology-Serology Laboratories, Chamblee, Georgia
2. U. S. Public Health Service National Institutes of Health, Microbiological Institute, Division of Infectious Diseases, Bethesda 14, Maryland
3. U. S. Public Health Service, Communicable Disease Center, Virus and Rickettsia Laboratories, Route 3, Box 436, Federal Drive, Montgomery 5, Alabama

SPECIMENS EXAMINED

NOVEMBER 1949

Examinations for diphtheria bacilli and Vincent's	544
Agglutination tests (typhoid, Brill's and undulant fever)	890
Typhoid cultures (blood, feces and urine)	293
Examinations for malaria	274
Examinations for intestinal parasites	4,151
Serologic tests for syphilis (blood and spinal fluid)	22,271
Darkfield examinations	8
Examinations for gonococci	1,886
Examinations for tubercle bacilli	2,533
Examinations for meningococci	2
Examinations for Negri bodies (microscopic)	70
Water examinations	1,344
Milk and dairy products examinations	5,158
Miscellaneous	764
Total	40,188

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

VETERANS ON THE FARM TRAINING PROGRAM IN RELATION TO TYPHUS FEVER CONTROL IN ALABAMA

Contributed by

P. Kyle

Associate Scientific Assistant

Many inventions and discoveries are made by accident and result from lines of activity or experiment carried on as routine work, or, disassociated from the inventions or discoveries, later prove beneficial. Thus it was that while performing routine typhus control work in an urban area it became possible to induce the instructors and personnel in charge of the veterans groups who were enrolled in the "Veterans On The Farm Training" program in Winston County, Alabama, to consider and later initiate a rat eradication program, a program which considered the economical aspect as well as being a health measure.

Last April, as the routine poisoning campaigns in Haleyville and Double Springs, Alabama, progressed, they were watched with interest by the Director of the "Veterans Farm Training Program" for Winston

County. The few pounds of the prepared bait material remaining after the completion of the above campaigns were distributed on a heavily rat-infested farm adjacent to Double Springs. The results were so effective that the veterans organization was eager to institute some method whereby the trainees could reduce to a minimum or rid their farms of this pest which constitutes a health hazard, as well as being an economic drain. After consulting the Alabama State Health Department, it was decided to try a county-wide extermination campaign, with the trainees performing the necessary work of preparing and distributing the poison bait. As each class of trainees meet at regular intervals throughout the month, at rural schools or churches, several classes were grouped together and assigned the school or church most convenient to all classes so grouped as the assembly place for instruction and preparation of material for the campaign. As expendable funds for the training purposes were limited, each trainee was required to pay a certain small sum, based on the actual cost per pound of the prepared bait. Though the cost of material varies slightly in different areas of the state, in this particular area it was approximately twenty-nine cents per pound. Therefore each trainee was required to pay twenty-five cents per pound for each pound ordered, the difference to be paid by the "Veterans Training Program" from the "consumable supply" fund. In this way the burden on the training fund for the entire county was less than twenty dollars, while no trainee was pinched financially.

Meetings were scheduled, usually one each morning and one each afternoon, at a sufficient number of places throughout the county to enable all classes to be contacted, each group consisting of approximately forty to sixty men. At each meeting a lecture was given on rat-borne diseases, with particular emphasis on typhus fever or Brill's disease. The destruction of grains and other materials, with the resultant financial loss, was also stressed. It was made known that no trainee was compelled to purchase this poison, and in the event none was desired no black mark would be placed against his training record. Therefore, only those men interested enough to pay a small fee and perform a small amount of work were par-

ticipants. Thus a conscientious distribution of bait was secured. In Winston County, and later in counties operating similar campaigns, the trainees demonstrated their interest by nearly one hundred per cent participation.

With the explanation that one pound of material properly prepared would make sixty to seventy pieces of bait, it was left to each man as to how many pounds he needed to poison his premises thoroughly. The amounts needed ranged from one to ten pounds. Payment was made to the class teacher, who in turn deposited it with the Director where it remained until paid out for the materials which were used in the entire county campaign. In addition to preparation of the poison bait, a demonstration of actual distribution of the bait upon a farm was made whenever such a demonstration was feasible. Often, while poisoning in an urban area, time is lost because of inclement weather; however, this seldom happens in a G. I. county-wide campaign as each man attends to his own premises, and the short time needed for this precludes the necessity of halting the whole program.

This initial or trial program instituted in Winston County resulted in the poisoning of three hundred farms—a small enough number out of the sum total of the county—but it should be kept in mind that these farms are located strategically throughout the county, and the success of each farm will become known to adjacent farmers who have no organization such as the "Veterans Training Program" and otherwise might remain in ignorance of the value of rat eradication. In general, these veteran trainees are leaders in their respective communities and the attitude they adopt can influence all health programs planned for that area.

In the seven counties of Alabama that have participated in extermination campaigns the results have been excellent, and reaction of the population favorable, as attested by the fact that one county has had its second campaign, while in others poison ingredients and instructions are maintained for the use of all farmers. Also, in two areas non-veteran farmers have requested and have been aided in poisoning their farms. These latter groups comprised about seventy-five farms. The desire to help themselves and further the program has been com-

mendable. And too, a successful rat campaign aided the institution of a "residual spraying program" in one county which might have met firmer opposition otherwise.

In the past, because of a lack of organization among farmers, such as city councils or civic clubs as program sponsors, it has been almost impossible to do the work which should be done in rural areas; nor when typhus first became a reportable disease in Alabama was rural aid needed. But now the incidence of typhus fever is as great in the country as in the towns, and as it spreads slowly to the northern part of the state, the case is as likely to be reported from a rural area as a city. City campaigns are necessary, effective and credible, but would they not be still more effective if the adjacent areas could also be treated? It is obvious that if paid labor had to be employed in rural areas the cost would be prohibitive. Ready at hand is the "Veterans On The Farm Training" with its thousands of trainees, most of whom are anxious to protect and aid themselves, as well as their neighbors. With intelligent, progressive leadership by the veterans' teachers and aggressive work by the county sanitation officer, untold good can be accomplished by rat eradication throughout the State of Alabama.

Though practically in the trial stage, seven counties, by using well over two tons of poisoned bait, have poisoned 3,110 farms at a minimum of expense. And while too early to try to evaluate complete results, it is safe to say that the educational factor alone is worth the effort of instituting G. I. campaigns. The continued systematic eradication of thousands of rats must retard, if not stop, the spread of typhus fever. Today the idea of "self protection" is spreading to the non-veteran farmers, and from the interest now manifest, it seems that the seven counties which have participated so far are but the forerunners of many more to come.

Tuberculosis involves many things besides hospital, medical, and nursing care. It has many requirements on the social welfare side and these needs are often of long duration. The tuberculosis problem is one of prehospital and posthospital care with all that they mean. Moreover, it is a problem of the care of the patient's family as well as of the patient.—*Ruth Taylor, Nat. Tuberc. A. Bull., Oct., 1949.*

BUREAU OF VITAL STATISTICS **Ralph W. Roberts, M. S., Director** **PROVISIONAL BIRTH AND DEATH STATISTICS FOR SEPTEMBER 1949, AND COMPARATIVE RATES**

Live Births, Stillbirths, and Deaths by Cause	Number Registered During September 1949			September Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	7578	**	**	30.1	33.7	31.0
Total stillbirths	212	**	**	27.2	13.2	27.6
Deaths (stillbirths excluded)	1997	1131	866	7.9	8.0	7.8
Infant deaths—						
Under one year	261	144	117	34.4	30.3	31.3
Under one month	187	106	81	24.7	21.5	24.5
Cause of Death						
Tuberculosis, 001-019	60	22	38	23.8	26.6	34.1
Syphilis, 020-029	15	4	11	5.9	7.5	7.2
Typhoid and paratyphoid, 040-041					0.4	
Dysentery, 045-048	5	3	2	2.0	***	***
Diphtheria, 055	3		3	1.2	2.0	1.2
Whooping cough, 056	2		2	0.8	2.0	1.6
Meningococcal infections, 057	2	2		0.8	2.4	0.8
Poliomyelitis, 080, 081	2	2		0.8	1.2	0.4
Encephalitis, 082, 083					0.4	
Measles, 085						0.4
Typhus fever, 100-108					2.0	0.8
Malaria, 110-117	2		2	0.8	1.6	0.4
Malignant neoplasms, 140-200, 202, 203†	204	133	71	80.9	87.3	71.8
Diabetes mellitus, 260	26	15	11	10.3	12.3	8.8
Pellagra, 281	4	1	3	1.6	0.8	2.4
Vascular lesions of central nervous system, 330-334	224	121	103	88.8	78.9	77.4
Other diseases of nervous system, 300-318, 340-398	27	17	10	10.7	8.3	***
Rheumatic fever, 400-402	4	1	3	1.6	0.8	***
Diseases of the heart, 410-443	567	347	220	224.9	193.9	175.6
Diseases of the arteries, 450-456	28	13	15	11.1	7.1	12.4
Other diseases of the circulatory system, 444-447, 460-468	26	18	8	10.3	2.8	***
Influenza, 480-483	3	2	1	1.2	2.8	2.4
Pneumonia, 490-493	46	28	18	18.2	23.4	20.8
Bronchitis, 500-502	2	1	1	0.8	2.0	1.6
Appendicitis, 550-553	8	5	3	3.6	2.8	3.2
Intestinal obstruction and hernia, 560, 561, 570	14	6	8	5.6	7.1	9.2
Gastro-enteritis and colitis (under 2), 571.0, 764	28	11	17	11.1	10.3	2.8
Cirrhosis of liver, 581	13	10	3	5.2	4.8	6.8
Diseases of pregnancy and childbirth, 640-689	11	5	6	15.4	17.4	29.0
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	2	1	1	2.6	1.2	3.8
Congenital malformations, 750-759	27	19	8	3.6	4.4	***
Accidental deaths, total, 800-962	126	78	48	49.2	47.6	57.7
Motor vehicle accidents, 810-835, 960	64	43	21	25.4	17.4	22.1
All other defined causes	387	233	154	153.5	182.0	216.5
Ill-defined and unknown causes, 780-793, 795	131	34	97	52.0	53.5	54.9

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the September report of the years specified.

***Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204) and mycosis fungoides (205).

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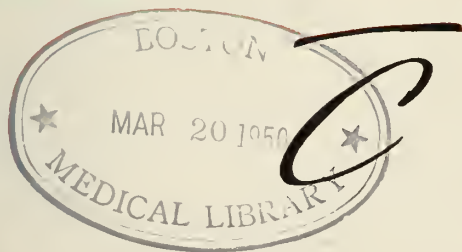
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THE ROLE OF THE MEDICAL COLLEGE IN THE MEDICAL CARE OF THE VETERAN

ROY R. KRACKE, M. D.

Birmingham, Alabama

The purpose of this paper is to present basic information to the doctors of Alabama with respect to medical care of the veterans in this State, the program of hospitalization in effect and contemplated, and the role of the Medical College of Alabama in the medical care of the veterans.

The Medical Department of the Veterans Administration has come to be one of the largest agencies in the world concerned with medical care. On July 31, 1949, the Veterans Administration was operating 106,491 hospital beds in 130 institutions. Of these beds, nearly 50,000 were for general medical and surgical purposes; nearly 50,000 were for neuropsychiatric problems; and nearly 10,000 were devoted to the care of tuberculous veterans. In addition to this, there is under construction some 32 hospitals with an additional 15,000 beds and there are being planned 30 more hospitals with an additional 21,000 beds. Conservative estimates would indicate that the Veterans Administration will operate approximately 150,000 hospital beds within a few years. Besides its vast system of hospital operations, it operates a program of medical and dental care by local physicians and dentists and large numbers of outpatient clinics, usually found in major cities throughout the country.

Thus, the giant, sprawling, medical organization devoted to the care of the veteran

is probably the largest venture in medical care ever attempted in this country. It is a matter of considerable interest to the physician and to the veteran to know what type of medical care is being rendered in these institutions. This can be easily summarized by stating that the quality of medical care is probably second to none in the United States. Indeed, it seems probable that the American veteran today receives the highest quality medical care offered anywhere in the world. There are a number of reasons for this. First, it should be recalled that prior to the conclusion of the Second World War, the Veterans Administration operated a much smaller program which was developed mainly between World War I and World War II. It is a matter of history now that this program had deteriorated largely to custodial institutions during that period. This apparently came about because of a lack of competent administration in the Central Office, the invasion of the Veterans Administration by politically dominated people, and a general disregard for the basic factors necessary in a first-class program of medical care. At that time the institutions were mainly custodial in nature; it was difficult to secure competent and highly trained personnel; the morale of the professional groups fell to a dangerously low ebb; and it was well nigh impossible to recruit skilled medical people within the institutions. This became so obvious that the veteran avoided hospitalization if he could

Dean, Medical College of Alabama; Vice-Chairman, Special Medical Advisory Council to the Veterans Administration.

and the entire problem practically assumed the proportions of a national scandal. Such was the situation at the beginning of World War II.

At the conclusion of World War II radical changes occurred. The top officials of the Veterans Administration were cleaned out. General Omar Bradley became the administrator and Dr. Paul Hawley the chief of the Medical Department. These men came into the Veterans Administration with new ideas and a determination to offer a type of medical care to the veteran that was second to none. Policies instituted by them have been capably carried on by their successors, General Carl Gray and Medical Director Paul Magnuson. In order to effect these far-reaching reforms in the Medical Department, sweeping and radical changes were necessary. A long and tedious process of elimination of incompetent people had to be undertaken. Programs of recruitment to secure the best medical talent were put into effect and the aid of top-ranking medical men in the United States was freely sought and utilized, and continues to be up to this day. This resulted in the acquisition of some of the finest medical brains in the United States for full-time services.

An important decision of the new regime was to utilize the facilities of medical education throughout the country in offering good medical care to the veteran. It has long been recognized, of course, that hospitals operated by teaching institutions, in general, offer a high type of medical care. Consequently, the fundamental decision was made that as many Veterans Hospitals as possible would be built in the immediate proximity of teaching institutions, thus assuring the patients a guaranteed source of competent medical talent in any and all fields. This policy has continued and today there is scarcely a medical school in the United States that is not directly or indirectly concerned in the program of veterans' medical care.

At the present time there are 78 teaching hospitals being operated by the Veterans Administration and the majority of these utilize the services of medical school faculties in the development of their educational programs and in the problems of patient care. Since these institutions can always

serve as referral points for the more difficult problems in other Veterans Hospitals, it is obvious that the veteran will continue to receive the benefit of the best medical talent in the country. Veterans Hospitals, for the most part, are now being built in large centers of population where there is ready availability of medical talent. This is in striking contrast to the older policy when institutions were built in areas where congressional pressure was strongest.

All of this has not been done without considerable difficulty. There still exists the ever present political pressure to build Veterans Hospitals in remote and inaccessible areas, as illustrated, for example, by the fiasco of a Veterans Hospital in Miles City, Montana, built under the urging of Senator Murray at the unprecedented cost of \$51,000 per bed. Any physician knows that such institutions are foredoomed to medical mediocrity. Even though first-class medical men are stationed at such institutions, it is only a matter of time until there is serious loss of morale, rapid turnover of professional personnel, and, in general, a medically deteriorated situation. On the whole, however, with such exceptions as noted above, the hospitals have been built in areas where the greatest medical service can be rendered because the most competent doctors can be secured as consultants. It is far better for the veteran to be transported to a distant, large-center hospital, even though he suffers the inconvenience of being away from family and friends, rather than to try to bring the hospital to him.

These fundamental principles of the Medical Department of the Veterans Administration are recognized to be sound by the service organizations of the country, and it is these organizations that now stand in the forefront of upholding the Veterans Administration in its policy and resisting political pressures to build hospitals in isolated and remote areas.

VETERANS HOSPITALS IN ALABAMA

At first glance, Alabama appears to be well supplied with Veterans Hospital beds as compared with the country as a whole. Thus, final plans call for 7.03 beds per thousand veterans over the country and Alabama would have 12.40 beds per thousand veterans. This is accounted for in large

part by the fact that the large hospital at Tuskegee is devoted primarily to the care of neuropsychiatric problems in the Negro and serves a large section of the Southeast and, also, that the hospital at Tuscaloosa is primarily a neuropsychiatric institution.

Today there are 3,503 Veterans Hospital beds in Alabama in three institutions, including 2,208 beds at Tuskegee, 1,010 beds at Tuscaloosa, and 285 beds at Montgomery. In addition to these, there have been authorized an additional 100 beds at Tuskegee for general medical and surgical purposes and a new institution of 500 beds at Birmingham, also for general medical and surgical purposes. Therefore, present plans would result in a total of approximately 4,000 beds in the State of Alabama, which would be roughly divided into the following categories:

1. Tuskegee Hospital, devoted entirely to Negroes, will ultimately have slightly more than 500 beds for general medical and surgical purposes; over 1,700 beds for neuropsychiatric cases; and about 50 beds for the tuberculous.

2. Tuscaloosa Hospital has about 100 beds devoted to general medical and surgical problems; over 800 to neuropsychiatric problems; and about 20 to the tuberculous.

3. Montgomery Hospital has about 225 general medical and surgical beds; about 20 neuropsychiatric beds; and about 30 for tuberculous patients.

4. The newly constructed 500-bed hospital at Birmingham will handle primarily general medical and surgical cases.

It will be noted that no Veterans Hospital can restrict itself entirely to patients within one of the three major categories. The general medical and surgical hospital always has a few neuropsychiatric and tuberculosis problems and the reverse is also true, as at Tuskegee, as shown by the fact that although it is primarily a neuropsychiatric hospital it has a rather large number of medical and surgical problems.

Including the beds in the projected building program, there will be in the State of Alabama about 2,500 beds for neuropsychiatric problems; about 1,300 beds for general medical and surgical purposes; and well over 100 beds for tuberculous patients.

ADMISSION OF PATIENTS TO THE ALABAMA VETERANS HOSPITALS

First, it should be pointed out that Veterans Hospitals in Alabama are practically full and stay full with long waiting lists. Thus, current reports indicate 95 per cent occupancy at the Montgomery Hospital, 94 per cent occupancy at the Tuscaloosa Hospital, and 97 to 98 per cent occupancy at the Tuskegee Hospital. There is hardly a Veterans Hospital anywhere that does not have a long waiting list of patients. This comes about not only because of the tremendous number of ex-service men who are eligible to receive the benefits of medical care but also because it is generally recognized among ex-service men that they can now secure the very best type of medical treatment in the Veterans Administration Hospitals. Consequently, it seems likely that the waiting lists will grow longer instead of becoming shorter, in spite of the fact that new beds are being constructed over the country. As in any medical situation, it is an interesting commentary that the better the medical service provided, the greater will be the demands made upon it. Therefore, as long as the V. A. provides a first-class program of medical care, it can be confidently expected that the veterans of this country will demand more and more of it.

Indeed, the best way to cut down the long waiting lists of veterans seeking medical care is to permit the medical service to deteriorate to such an extent that nobody will want it. This, of course, cannot be permitted to happen, so it is reasonable to expect that veterans will continue to demand admission in greater numbers than the institutions can service as long as medical care remains at a high level.

The number of patients admitted and who are eligible for admission through the Veterans Hospitals is not regulated by the staffs of the institutions themselves, but is regulated by Congress. It is the Congress of the United States who says who can receive medical care and who cannot receive it in the V. A. Hospitals and this fundamental fact should be borne in mind. At the Montgomery Hospital top priority is given to patients requiring treatment for service-connected disabilities. These patients are entitled in all Veterans Hospitals to have medical care at any time.

Second priority is given to nonservice-connected cases that require emergency treatment. Thus, a group of veterans may be involved in an automobile accident. Such patients are given immediate care in V. A. Hospitals without regard to their financial status or to any service-connected features.

Then, other nonservice-connected disabilities, such as elective surgery, are carried on a waiting list and are authorized to report for hospitalization as beds become available. In these cases, however, it is necessary that the veteran take what is commonly referred to as a "pauper's oath." It is, in effect, a statement of indigency in which the veteran declares himself unable to secure this medical care from his own resources. The Congress authorizes Veterans Hospitals to offer medical care to this group of people. It should be pointed out that the veterans, regardless of their economic status, as a rule are quite willing to sign this "pauper's oath" and, indeed, the great majority of patients in the Veterans Hospitals in the country today are in this category. The only way, therefore, for the V. A. Hospital population to be decreased is for the Congress to pass laws that would restrict admission of such patients, but so far Congress has been unwilling to do this.

At the Tuscaloosa Hospital only white veterans who are eligible for the benefits of the Veterans Administration are admitted. Currently they accept only service-connected cases and emergencies on the neuropsychiatric service. At Tuskegee, which serves only Negroes, the policies are slightly more liberalized. They admit practically any Negro veteran from nearby communities, regardless of the type of disability from which he suffers. They admit all seriously ill patients, with the possible exception of those suffering from tuberculosis and this is because of a shortage of bed space for tuberculosis cases. They even provide transportation costs for applicants who are unable to defray their expenses to the hospital. Patients who present themselves to the hospital without previous application and who are eligible for admission because of military service are admitted if their condition is an emergency. If not an emergency, but if the need for treatment is definite, they are admitted if there is unoccupied bed space.

The Montgomery Hospital services patients from all of Alabama, with exception of the extreme north section, some from Northwestern Florida, and some from Southwestern Georgia. The Tuscaloosa Hospital takes patients from Alabama, Northern Mississippi, Western Georgia and Florida, whereas the Tuskegee Hospital, being devoted entirely to Negroes, and primarily neuropsychiatric, takes patients from more distant areas, such as North Carolina, South Carolina, and other southern states.

TYPE OF MEDICAL SERVICE IN THE V. A. HOSPITALS IN ALABAMA

Since the author and his colleagues on the faculty of the University of Alabama Medical School have been actively participating in the teaching program in all three of the Alabama hospitals, I feel that we are in position to carefully evaluate the type of medical work that goes on in these institutions. In the opinion of the author, it can be summarized by stating that it is extremely high class, indeed, and probably on a level considerably higher than medical care afforded to the general population and, for that matter, considerably higher than the medical care available in the average civilian hospital.

The veteran who enters one of the three Alabama hospitals can be guaranteed a type of medical service that is second to none in the State. This comes about from a variety of reasons. First, the professional staffs of these institutions are comprised of a group of extremely competent, high-grade, well trained, professional men with a high *esprit de corps* and morale. Secondly, the availability of consultative services is an important factor. Thus, when members of our Medical College faculty visit these institutions, we see practically every difficult diagnostic problem that the institution has at that time. Ease of consultation, therefore, has come to be an extremely important part of the medical care of the veteran. Thirdly, in all of the Veterans Hospitals in Alabama a considerable amount of teaching activity constantly goes on and this is notably true in the Tuskegee Hospital. Furthermore, many members of the staff are constantly engaged in research and preparation of papers; travel allowances are liberal so that staff members attend meetings frequently; and no restrictions are placed on the amount

of investigative work that might be done on any patient in order to arrive at a successful diagnosis.

Most of the department chiefs in the Veterans Hospitals have been certified by their respective boards. Indeed, at Tuskegee there appears to be one of the largest concentrations of competent Negro medical talent assembled anywhere in the United States.

The system of referral of patients in the V. A. Hospitals also guarantees a high type of service. Thus, if there is a brain tumor to be handled, it is referred to one of the centers where large neurosurgical departments have been established. The same is true with some of the deep therapy x-ray problems, chest surgery, plastic surgery, and some of the medical conditions that require a high degree of skill and training and which, by necessity, cannot be developed in all institutions. Furthermore, even in such services as pathology, if there is any doubt about the identity of pathological material it can be instantly referred to the Army Medical Museum in Washington for final diagnosis. In addition to that, there is a constantly visiting group of specialists of all types who make tours into the Veterans Hospitals from the Regional Offices and who consult on the diagnostic problems. The entire system, therefore, is designed to provide the highest type of medical care.

THE ROLE OF THE MEDICAL COLLEGE IN THIS PROGRAM

For the past two years the Medical College of Alabama has offered programs of lectures, seminars, and ward rounds at V. A. Hospitals at Tuscaloosa and Montgomery and beginning July 1, 1949, an intensive program was begun at the hospital at Tuskegee. Faculty members may be either designated by the school or chosen by the Veterans Hospital, usually for weekly visits to the institution. On the clinical services the visits may consist of ward rounds, consultation on the more difficult problems, and in some instances actually carrying out operative procedures in the institution. The lecture and seminar series have been based upon the requests of the staffs of the hospitals concerned. Thus, for example, at the Tuscaloosa Hospital the author has given a series of several lectures in the field of hematology and at the same time consulted on the hematological problems that were

present in the institution at the time. A similar program has been in effect at the hospital in Montgomery. It is anticipated that such programs will be continued in these institutions. Furthermore, the visiting of the faculty has resulted in some staff members of these institutions coming to the Medical College for postgraduate work for brief periods.

Beginning on July 1, 1949, the Veterans Hospital at Tuskegee was designated in Central Office as a so-called Deans' Committee Hospital. This is the designation usually employed referring to teaching institutions and those serviced by medical schools. Educational programs developed in the Deans' Committee Hospitals are usually geared to provide instruction for the group of residents who are being trained in such institutions. Thus, at Tuskegee there are now approved residency trainings in the fields of general medicine, general surgery, neuropsychiatry, and radiology and it is quite likely that more programs will be approved as time goes on. The Tuskegee Hospital may well prove to be one of the larger postgraduate training areas for young Negro physicians in the United States. Besides the instruction provided by the regular staff, the educational program there is carried on by visiting faculty from the Medical College of Alabama and Emory University. Teams of faculty members visit the institution for one full day at least once weekly. During this time educational activities are presented, including lectures, seminars, conferences, and ward rounds. Undoubtedly, the hospital at Tuskegee will continue to be a Deans' Committee Hospital in which several medical schools, no doubt, will participate.

It is estimated that the new 500-bed general medical and surgical hospital will be finished in Birmingham about three years from this date. It, too, will become a Deans' Committee Hospital and be serviced by the faculty of the Medical College of Alabama since it will be built just across the street from the School of Medicine. It seems likely that it will ultimately become the referral point for a considerable number of specialized and difficult diagnostic problems. At the same time, it is anticipated that the Medical College faculty will continue to carry on programs in the other V. A. Hospitals in Alabama such as has been done

heretofore. Therefore, the Medical College and its faculty finds itself, as with all other medical schools in the United States, definitely committed to the medical care of the veteran. It is not unlikely that in years to come some of these Veterans Hospitals may be utilized as teaching hospitals for medical colleges. Tendencies in that direction are already becoming evident in some parts of the country. Although it is not planned at present to utilize the institutions for undergraduate teaching, this may come about with the passage of time.

From the educational standpoint, it should be remembered that the teaching material in the Veterans Hospital is rather highly restricted. Although it is quite adequate in most of the medical specialties, it is deficient in such fields as obstetrics, gynecology, pediatrics, and acute emergency problems.

In the future it seems probable that the medical colleges of the United States will become closer tied with the V. A. Hospitals

which are usually built in close geographic association with them. Indeed, in some instances, medical colleges may become dependent to a certain extent upon their V. A. Hospital affiliations, but such dependence should not be permitted to develop if it is at all possible to avoid it. The very fact that a V. A. Hospital in many cities in the United States stands across the street from the medical school will always guarantee, however, a close working relationship between the two groups.

The role of the Medical College of Alabama, therefore, in the medical care of the veteran seems destined to be an important one that is likely to grow as the years go by. The fact that the Medical College of Alabama accepts its responsibilities in this field of medical care and public service is simply another indication that the medical schools of today and tomorrow must be more than educational institutions and shall become instruments of public service.

A FULL STOMACH

W. F. ENGLEBERT, M. D.

Tuscaloosa, Alabama

A 28 year old male, a patient at the Alabama State Hospital, was reported by an attendant to be gradually losing weight. The staff physician interviewed and examined the man immediately.

The interview revealed that the patient had been vomiting a little after meals but had no pains or any other physical complaints. The physical examination was essentially negative with the exception of a round firm mass in the region of the stomach.

The x-ray picture of his chest was normal, but the picture of the stomach (Fig. 1) was most interesting. One could count 9 bed springs, one bottle cap, and many pieces of wire.

A laparotomy was done and, when the stomach was opened, the following articles (Fig. 2) were found:

- | | |
|-------------------|-----------------|
| 14 cot springs | 1 washer |
| 31 pieces of wire | 2 overall snaps |
| 41 rocks | 1 small nut |
| 2 pieces of glass | 1 bolt |
| 1 bottle cap | 1 spoon handle |



Fig. 1

It is not known how long these foreign objects had been in the stomach, as the patient is so deteriorated one can elicit very little information from him. Many pieces of wire were found to be pin-point sharp at each end and ranged from 4 to 8 inches long. The cot springs were $2\frac{1}{2}$ inches long by $1\frac{1}{4}$ inches wide and many places were eroded so badly that they could have easily been broken. It is possible that the gastric juices had sharpened the wires and eroded the springs.

The stomach and abdomen were closed without drainage and the patient made an uneventful recovery, but it is feared that he may resort to a metal diet again in the near future.

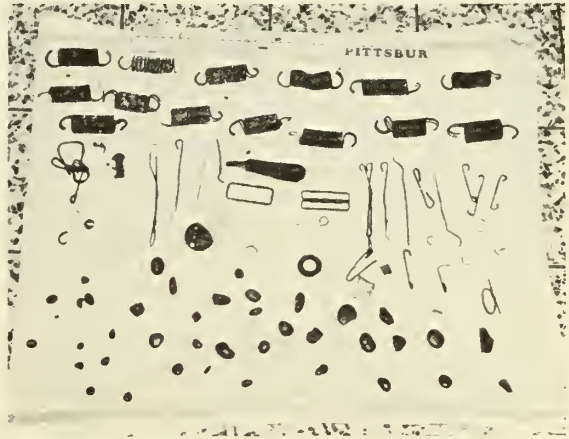


Fig. 2

THE USE OF ELECTROENCEPHALOGRAPHY IN CLINICAL MEDICINE

SAMUEL C. LITTLE, M. D.

Birmingham, Alabama

It has only been 20 years since Hans Berger¹ first reported that a rhythmical electrical activity could be recorded from the human brain. In this short time the branch of medicine devoted to the study of this electrical activity, electroencephalography, has grown rapidly. At present electroencephalography is almost indispensable to the neurophysiologist, is in daily use by those specializing in the field of nervous and mental diseases, and more and more physicians in other branches of medicine are beginning to avail themselves of this new diagnostic aid.

All cells have inherent electrical activity as the result of their metabolic processes. The electrical activity of the cells of the cerebral cortex is rhythmical, probably as the result of synchronizing activity of deeply placed pace-making centers. After the electrical potentials of the cortex cells have been transmitted through the skull and scalp they are reduced in magnitude about fifty times but it is still possible to pick them up and amplify them with appropriate instru-

ments. The record of these potentials is called the electroencephalogram or EEG.

The usual method of obtaining an electroencephalogram is to affix small electrodes to the scalp and the ears. Through established usage the scalp leads are termed "active" electrodes because they are over the cortex, while the ear leads are termed "indifferent" or "reference" electrodes as they are relatively remote from cortical areas. The standard positions used in the EEG Laboratory of the Medical College of Alabama are seen in Fig. 1. The electrical potentials between two scalp leads or between a scalp and an ear lead are amplified about 100,000,000 times and recorded in ink on a moving paper tape. Although the terms are not entirely accurate, it is convenient to refer to scalp-to-scalp recordings as "bipolar" and scalp-to-ear as "monopolar" recordings. With the better types of modern equipment

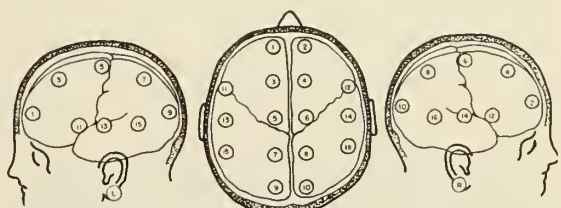


Fig. 1

From the Division of Neurology, Department of Medicine, Medical College of Alabama.

1. Berger, H.: *Über das Elektrenkephalogramm des Menschen I. Mitteilung.* Arch. f. Psychiat. 87: 727-570, 1929.

it is possible to record from eight pairs of electrodes simultaneously.

The electroencephalogram as we see it recorded on the paper tape is the end result of a number of variables:

- 1. The technical artifacts arising from the machine, electrodes and connections.
- 2. The electrical activity of the individual cells of the cerebral cortex.
- 3. Synchronizing or desynchronizing effects of other areas of the brain.
- 4. Variations in the functional state of the cells and pace maker resulting from changes in metabolism and from disease processes.
- 5. Changes in degree and kind of incoming stimuli from the environment.

THE NORMAL ELECTROENCEPHALOGRAM

An example of a normal EEG is shown in Fig. 2. The rhythmic activity in the occipital region is frequently termed the "alpha" rhythm, with other frequencies in other areas being called "beta," "theta," "kappa," and so on. The concept of normalcy in electroencephalography is based upon statistical analysis of large groups of normal individuals, and upon the training, experience and orientation of the individual interpreting the records.

In studying the EEG's of one thousand normal individuals, Gibbs² found many different types of records (Fig. 3). In the majority of instances the occipital tracing showed rhythmic activity in the 8.5 to 12.5 per second range. A smaller number showed only low voltage activity in all areas. The percentage of normal individuals showing

these various types of activity is shown in Fig. 3. It will be noted that less than 0.5 per cent showed paroxysmal patterns similar to those found in epilepsy.

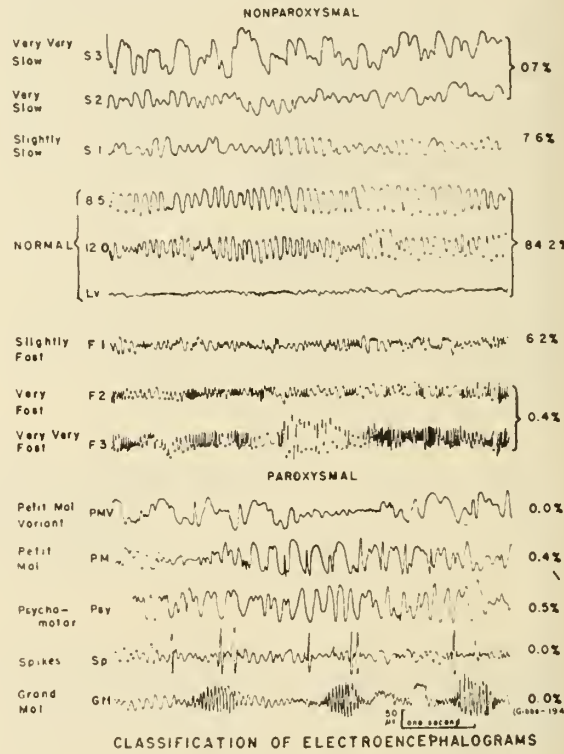


Fig. 3

VARIATIONS IN THE ELECTROENCEPHALOGRAM IN NORMAL INDIVIDUALS

As an electroencephalogram is a partial expression of the general functional state of the individual it is not surprising that changes in the EEG are noted with changes in age, state of waking or sleeping, atten-

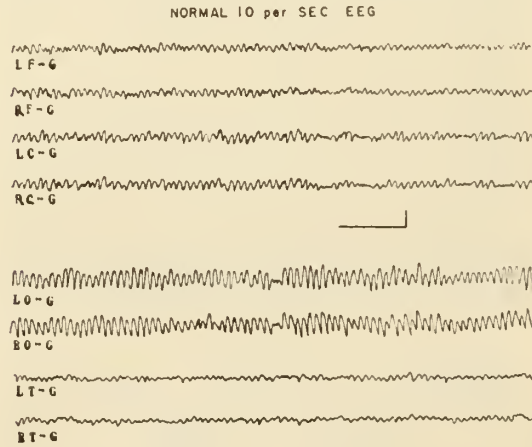


Fig. 2

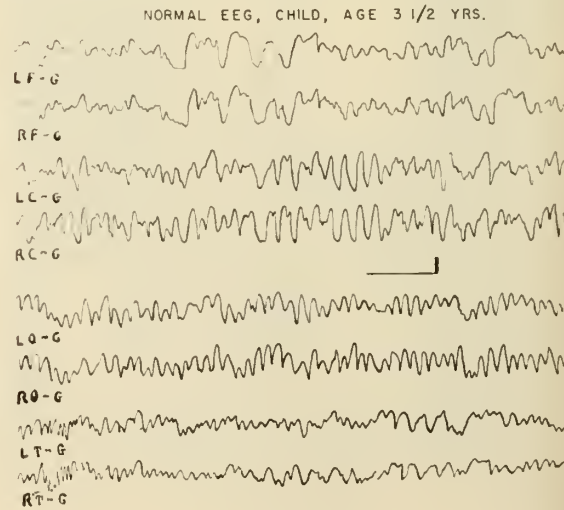


Fig. 4

2. Gibbs, F. A.; Gibbs, E. L., and Lennox, W. G.: Electroencephalographic Classification of Epileptic Patients and Control Subjects, Arch. Neurol. & Psychiat. 50: 111-128, 1943.

tion, changes in blood sugar and changes in oxygen tension.

The dominant frequency in children is slower than in adults (Fig. 4). It gradually increases until most children at age 13 have a dominant or "alpha" frequency within the normal adult range. After the age of 13 there is little change with increasing age.

Drowsing and sleeping produce profound changes in the electroencephalogram, each stage of sleep being characterized by fairly definite patterns (Fig. 5).

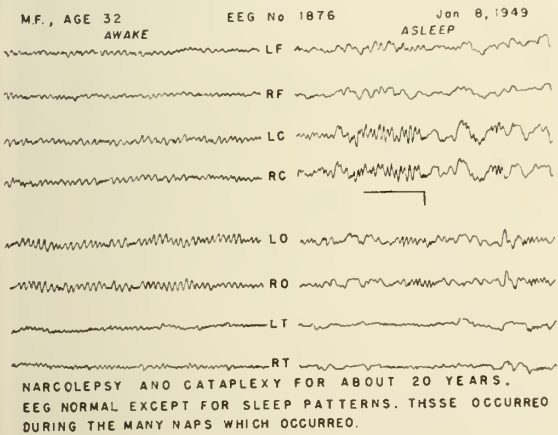


Fig. 5

Attention and mental activity and opening the eyes temporarily suppress the "alpha" frequency (Fig. 6). Recent studies have suggested that certain areas of the brain may show specific frequencies during thought.³

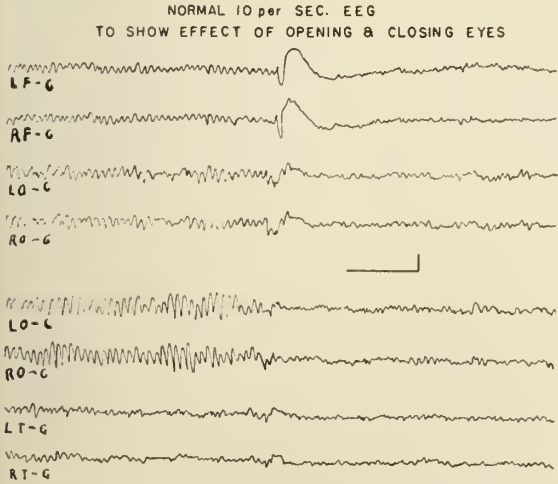


Fig. 6

3. Kennedy, J. L.; Gottsdanker, R. M.; Arming-ton, J. C., and Gray, F. E.: A New Electroen-cephalogram Associated with Thinking, Science, 108: 527-529, 1948.

If the carbon dioxide tension of the blood is lowered by causing the patient to over-ventilate, slowing of the electroencephalo-gram occurs in most children and many adults (Fig. 7). This procedure is used routinely as a measure of the stability and maturation of the patient's EEG. In addition, overventilation will frequently pre-cipitate specific abnormalities such as the characteristic dysrhythmic pattern of petit mal epilepsy.

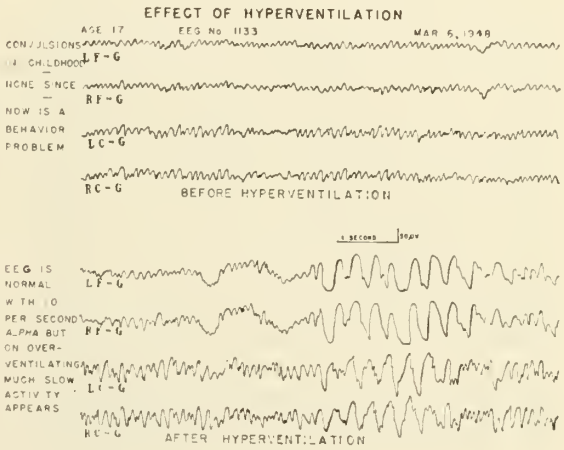


Fig. 7

Abnormalities appearing in the electroen-cephalogram may be studied according to their time of occurrence, their distribution or their frequency. Thus, the abnormality may occur paroxysmally or non-paroxys-mally; may be generalized or focal; may be too fast, too slow or a mixture of activity which is too fast and too slow.

Before turning to the consideration of specific clinical conditions, it is well to point out that the EEG reflects physiologic rather than anatomic changes. If the electrophys-iology of brain cells is abnormal, an abnor-mal EEG may result, whether or not detec-table structural changes are present. Sick brain cells are apt to produce an abnormal EEG, but cells which are dead have no elec-trical activity at all. Therefore, if a destruc-tive lesion is small and the other cells in this area have returned to a normal electri-cal state, the EEG may be normal in the presence of gross neurologic deficit. These principles explain the fact that epileptics so frequently show EEG abnormalities without detectable structural brain change, while, on the other hand, a patient with a long

standing hemiplegia may have a perfectly normal EEG.

DIFFUSE ORGANIC DISEASE OF THE NERVOUS SYSTEM

Any condition producing a lessening of contact with consciousness is likely to produce a general slowing of the EEG. Thus, we find very slow records, in delirium or coma from many causes, such as uremia, diabetes, post-epileptic stupor, or shock. When an excess of fast activity is present in general affections such as the above, it is usually assumed that there is some cortical irritation in addition to the depression. Where the underlying morbid process produces localized cerebral disease, focal EEG changes may be superimposed on the other generalized findings. Thus, if a patient were comatose from a cerebral hemorrhage, one would expect to find a slowed record with some degree of focal change. There is nothing specific about the electroencephalographic abnormalities noted in general disturbances of this sort. The findings in coma from diabetes and coma from encephalitis do not differ unless local cortical change or irritation results from the encephalitis.

The sequence of electroencephalographic change depends largely upon the course of the causative disease. Thus, if the process is reversible, the electroencephalogram should be expected to parallel the clinical improvement or progression. In many instances where the brain itself is affected, electroencephalographic abnormality will persist for some time after the patient is clinically asymptomatic (Fig. 8).

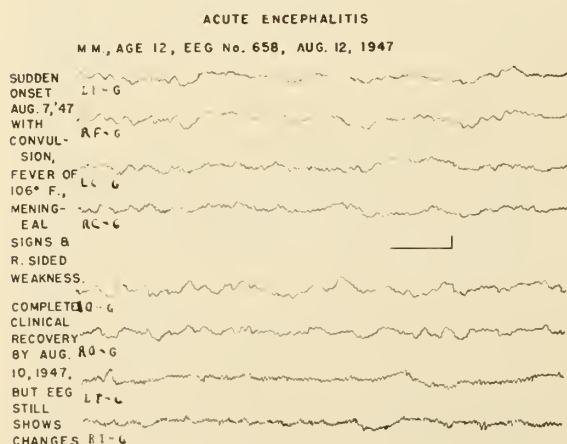


Fig. 8

LOCALIZED BRAIN DISEASE

If organic diseases are localized in the spinal cord, brain stem or structures of the posterior fossa of the skull, no EEG abnormality may be noted. Where the lesion is deep within the cerebrum, any changes present are more likely to be general than focal. If the local lesion involves the convexity of the cerebral hemispheres, local EEG abnormality will be found in many instances.

The sequence of change noted in the EEG is the same for most acute organic affections. There is a brief phase of shock or depression lasting minutes to hours during which all electrical activity disappears in the affected area. This stage is followed by the gradual appearance of slow waves which gradually increase in frequency. After several weeks or months, depending on the severity and reversibility of the disease, the involved area may show normal activity, activity of normal frequency but slightly reduced in amplitude, or activity which is somewhat slower than normal. In certain instances, after this time, evidences of cerebral irritation are manifested by patterns which we call "epileptogenic" because they are so frequently associated with clinical seizures.

VASCULAR LESIONS

Electroencephalographic changes in cerebral embolism, hemorrhage and thrombosis are much alike. The changes in hemorrhage are usually greater than other conditions due to the accompanying cerebral edema. Usually no EEG abnormality is found if the thromboses are deeply placed and are multiple and minute as in pseudo-bulbar palsy. The records pass through the sequence of shock, slowing and recovery described above (Fig. 9). Only rarely does epilep-

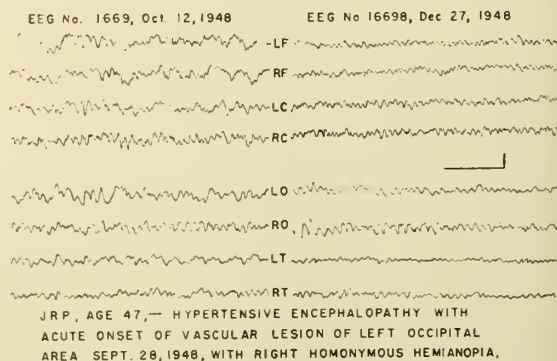


Fig. 9

togenic activity appear as the end result. Subdural hematomas are strangely difficult to detect with the electroencephalogram.

BRAIN TUMORS

If the tumor is deeply placed in the brain, it may produce diffuse rather than local abnormality. The electroencephalogram offers little help in tumors of the cerebellum or posterior fossa. The greatest usefulness of the test is in instances where the tumor involves the convexity of the hemisphere. Examples of the findings in brain tumors are shown in Figures 10 and 11. In a series of cases reported by the Montreal group¹ the usefulness of EEG in localizing tumors above the tentorium was as follows:

Correct localization 77%.

Poor localization 20%.

Localization to wrong side 3%.

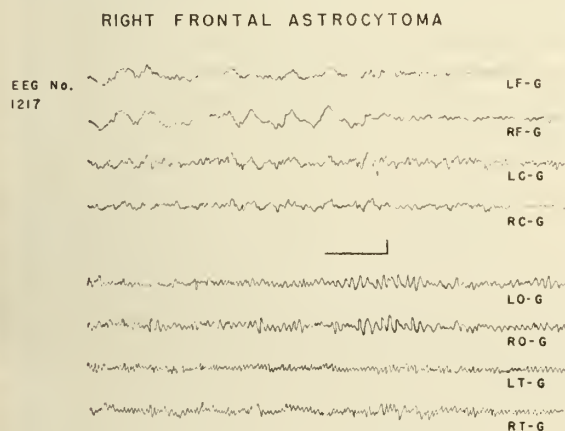


Fig. 10

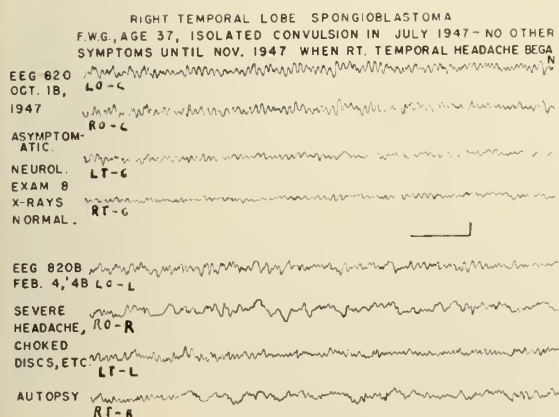


Fig. 11

4. Kershman, J., and Conde, A.: EEG in the Differential Diagnosis of Supratentorial Tumors, Given before the Second Annual Meeting, American Electroencephalographic Society, Atlantic City, N. J., June 12, 1948.

At the present time some idea as to the type of tumor present may be inferred from the form of the abnormal waves present in the EEG but the clinical course is generally superior in this respect. While the EEG is not superior to either the air encephalogram or ventriculogram in the localization of brain tumors, it must be remembered that it is much less hazardous and much more comfortable than either of these procedures.

TRAUMATIC CONDITIONS

Like vascular lesions, traumatic affections of the brain show EEG changes which follow the sequence of shock, slowing and complete or incomplete recovery. The occurrence of epileptogenic patterns is much more frequent after trauma than after vascular lesions and these patterns may appear months or years in advance of the clinical seizures. Serial electroencephalography in traumatic conditions is of great value in determining the prognosis and predicting the possibilities of the development of post-traumatic seizures.

The ordinary "post-traumatic head syndrome" shows little or no EEG change and this fact fits in well with the current opinion that one must look to extracranial or psychogenic causes to explain this syndrome completely.

The sequence of shock, slowing and recovery may run its course within thirty minutes in mild injuries or may not be complete in three months in a severe one (Fig. 12).

PSYCHIATRIC CONDITIONS

Briefly, the electroencephalogram is of little aid at present in the so-called func-

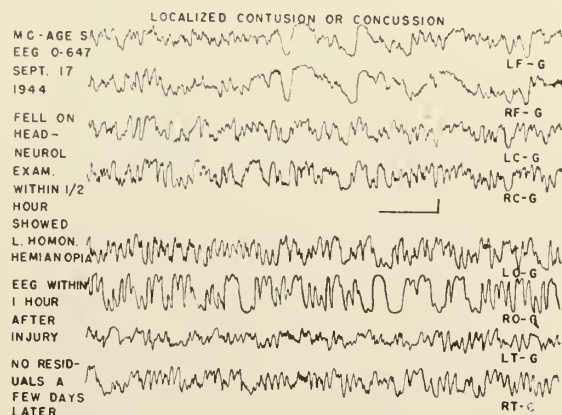


Fig. 12

tional psychoses and psychoneuroses. It is useful as an aid in ruling out organic bases for psychoses such as general paresis and brain tumor and in distinguishing psychomotor convulsive disorders from hysterical or psychoneurotic disorders. There is some disagreement about the frequency with which EEG abnormalities are found in behavior problem children and in adult psychopaths but the number of such cases is sufficiently great to warrant the inclusion of a routine EEG in the study of such patients (Fig. 13).

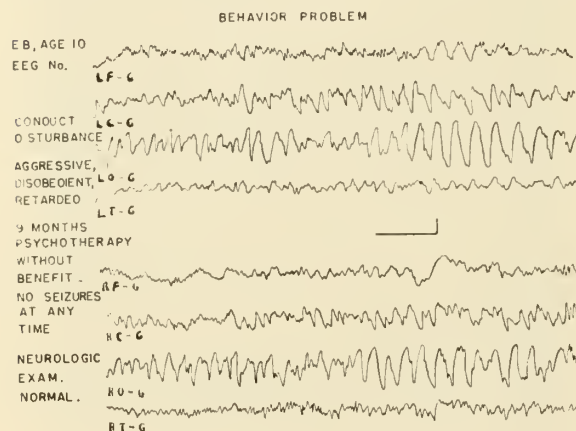


Fig. 13
EPILEPSY

Many contributions to the study of convulsive disorders have come from the field of electroencephalography. Most individuals seeing a large number of epileptics feel that the electroencephalogram should be done in all such patients.

When patients are suffering from recurrent generalized convulsions without other evidence of organic diseases of the nervous system, the clinical diagnosis is usually not difficult and the EEG will add little. On the other hand, when the disorders of consciousness are minor or may be simulated or hysterical attacks, the diagnosis is frequently difficult from a clinical standpoint. The electroencephalogram fits into this picture nicely. When the clinical diagnosis is easy, the electroencephalogram is of little help and when the clinical diagnosis is difficult the electroencephalogram is of great help. Thus, in grand mal, where the clinical diagnosis is easy, the electroencephalogram is of little help, and in petit mal and psychomotor disorders, where the clinical diagnosis is often difficult, the electroencephalo-

gram is of great help. The EEG findings in these three types of seizures are shown in Table 1 (Fig. 14).

EEG FINDINGS IN EPILEPSY

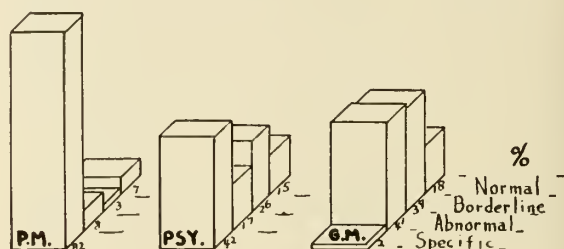


Fig. 14

An example of a petit mal disorder is shown in Fig. 15. The upper four lines show the EEG obtained between seizures and the lower four lines were obtained during a seizure. The types of patterns found in the other types of seizures are shown in Fig. 3.

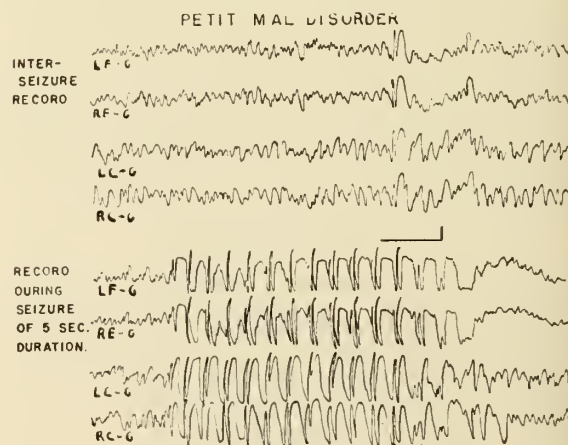


Fig. 15

In a paper of general scope such as this it is not possible to go into detail in regard to the EEG findings in epilepsy. Instead, a brief outline will be given of the principal ways in which the EEG can be useful to a physician investigating a case of epilepsy.

1. The first seizure: When a patient has a disorder of consciousness "out of blue sky," the EEG may aid in determining whether it is likely to be the first of a series as in epilepsy, or whether it is simply an incident in some other affection.

2. If other clinical evidence is absent, the EEG may be the only indication that the seizures are on the basis of localized brain disease such as tumor or a long-forgotten traumatic disturbance.

3. In many instances, latent or unreported psychomotor or petit mal disorders in patients with grand mal are first called to the attention of the physician through the EEG.

4. In certain types of disorders such as petit mal, EEG and clinical improvement may go hand in hand and the clearing up of the EEG may indicate the advisability of discontinuing medication.

5. As certain types of epilepsy respond to drugs which may make other types worse,

the EEG aids in choosing the medication to be used.

6. The EEG aids in differentiating minor epileptic attacks from vasomotor disturbances, hysterical attacks, etc.

7. If the seizures are the result of organic brain disease, serial electroencephalography may indicate incipient improvement or progression in seizures and in other clinical signs and symptoms.

PROBLEMS AND PLEASURES CONNECTED WITH A PSYCHIATRIC SECTION OF A GENERAL HOSPITAL

FRANK A. KAY, M. D.

Birmingham, Alabama

There has been much discussion during the last few years urging the establishment of psychiatric departments in general hospitals. Such recommendations have been made seriously by experienced psychiatrists who realize the difficulties that are encountered, but, on occasions, physicians and laymen alike have advised it without realizing the magnitude of the task. Not only is the creation of such a department a job of some proportion but its management and maintenance require much more than wishful thinking. Of course, where adequate funds are available, some of the problems which I shall discuss will be non-existent.

We opened our department at the Jefferson-Hillman Hospital, Birmingham, on September 22, 1947. The hospital is a part of the Medical College of Alabama, which emerged from a two to a four year school in 1945. We were allotted the west wing of the 11th floor, and by some means our Dean got together enough money to provide safety screen guards for half the windows. Hospital workmen fixed the windows of the rest of the section so they could not be raised enough to allow patients to jump out. Beyond this we have been on a pay-as-you-go policy.

We have 16 single rooms—four with bath, one with a toilet room, a fair sized recreation room, and a spacious rotunda in the center

at the entrance of the section, where also are located a nurse's station and a small office. We have no adequate space or way to provide subdivisions for disturbed patients; the two sexes are not separated. We can only accept paying patients, and, because of the small number, we operate with minimum personnel.

We have five graduate nurses, the head nurse being a well qualified and well trained psychiatric nurse. There are 3 nurse-aides, 2 colored maids, 1 diet kitchen maid, and a colored male employee who mops and sweeps but does not function as an orderly. There are no male attendants. We have no legal authority to keep in confinement those who seek release. Hence, by these statements it is obvious that we are surrounded by limitations which place the admission of patients on a necessarily selective basis.

Alabama, with a population of nearly 3 million people, does not have adequate, or even minimal, psychiatric facilities for its citizens. We have 2 state hospitals, one for colored and one for white patients, a school for white and for colored feeble-minded, three industrial schools, and one private sanitarium for psychiatric patients. Birmingham, its largest city, has only a few psychiatrists in private practice, Montgomery one or two, Mobile none. This does not include the Veterans Administration facilities which, of course, are for veterans only.

In spite of all the handicaps under which our department has operated, we feel that we have been of real service to our people. The first year we admitted 514 patients; this last fiscal year 524. The patients were, in the main, those of 3 Birmingham psychiatrists, a few were referred to the hospital itself, and a few were transfers from other services of the hospital.

Our admissions provide a fairly wide range of conditions, as illustrated by figures from last year's diagnostic tables. There were 410 first admissions (260 females, 150 males) and 114 readmissions (91 females and 23 males). The large number of readmissions is occasioned, in part, by a practice of dismissing some patients to go out on a trial basis and return later for additional scheduled and anticipated treatment. We had 75 patients with involutional disorders, 109 with manic-depressive psychoses, 121 with schizophrenia, 120 with psychoneuroses, including somatization reactions, and a few with syphilis of the central nervous system, convulsive disorders, epidemic encephalitis, senile and arteriosclerotic reactions, some with drug deliria, and an occasional patient with an intracranial neoplasm.

The turnover is quick—the average period of hospitalization for each patient being from 9 to 11 days figured on a month by month basis. Of course, some are in for just a few days of diagnostic study, some remain 5 or 6 weeks or more. This brief period of hospitalization is made possible by the practice of the attending psychiatrists to give follow-up treatment on an office and ambulatory basis.

On the problem side are many anticipated and unanticipated reactions. Naturally we covet the good will and support of the medical profession and seek the favor and friendliness of patients, their relatives, and citizens at large. We are doing a missionary job of trying to integrate psychiatry with the practice of medicine, where, in our opinion, it belongs and we strive to remove the unnecessary and undesirable stigma from mental illness.

It has been most embarrassing for some of us from time to time to have our section referred to, audibly, in lobbies and elevators as the "nut section." On not just one occasion have we ridden in the elevators with patients and relatives of patients and had local

physicians, fine and friendly men, make wise-cracks to us about the patients and the section, to the embarrassment of all save the person commenting, who was oblivious to the identity of some of the listeners.

Until we managed better, local physicians who had referred patients have read charts and then discussed the confidential data with the patient, to the patient's great amazement and harm.

We have unintentionally made certain physicians angry whose patients we could not admit because of lack of bed space or because the patient was too disturbed or too much of a potential danger to ward personnel and patients in residence to be admitted at all. We have irked some of our fellow physicians by being overcrowded when his patient in some other section of the hospital needed immediate transfer to the psychiatric section.

I might digress to reiterate here the expression of my surprise at many a physician's willingness to assume responsibility for and attempt to admit assaultive, combative, antagonistic persons who were either profoundly psychotic or intoxicated without any apparent thought about the dangerous situation it created, or any concern as to how such a person could be cared for in the hospital. Sometimes a patient is admitted to some other service of the hospital that we psychiatrists would not dare to accept as a responsibility, and yet are called upon to care for until better and safer arrangements can be made. For a long time, whenever a person started screaming in the hospital, the immediate reaction of nearly all nurses and doctors in the immediate vicinity was, "Transfer him to the 11th floor," not realizing that our floor was the quietest place in the hospital and with no thought as to what effect such screams would have on those who were already tense to the point of emotional collapse.

We have had patients, described to us as quiet and cooperative, brought to the hospital from great distances to find them noisy and uncontrollable, and their temporary care has caused great anxiety and sleeplessness among all responsible for them. The unrestrained and flirtatious hypomanic, both male and female, has sorely tried us, as has the untactful grumbler who creates dissatisfaction among his fellow patients by

his persistent and what we think are unwarranted criticisms. Patients from pathologically cohesive family settings usually have relatives who are hurt or made angry by visiting restrictions, and the patient made worse by the presence or absence of the relatives. These things we expect and handle routinely, thankful that it is nothing worse.

Special nurses without psychiatric background, whose emotional and personality reactions keep the patient in turmoil, make us avoid special nurses except on a most selective basis.

The neurotic patient with predominantly somatic complaints or free floating anxiety, and who needs a well supervised and understanding environment, is often upset by being in a psychiatric section. The thought of being placed among "mental cases" may terrify or humiliate him, and yet he may not do well in a medical section where nurses untrained in appropriate attitudes contribute to his illness and complaints. If he can get over the first few days without being harmed by similarly sensitive and prejudiced relatives, he will soon be enjoying the comradeship of fellow sufferers in an atmosphere of tolerance and good humor.

The man or woman without insight who constantly asks to go home, of course, reflects the need for a full program of satisfying activities. In spite of efforts to correct the situation the same attitude may not only continue to exist in him or her but spread to others and create a state of general dissatisfaction and restlessness. Abundant time on the part of all personnel, which is not always easily available, will eventually prove effective but does not keep the problem from reappearing.

The visiting psychiatrist whose experience has not included state hospital service may innocently admit a timid and apparently benign individual of schizophrenic reaction who, at a later time, becomes unexpectedly and impulsively assaultive and dangerous. Such a patient, particularly a strong man, cannot be handled by female nurses and if this emergency develops during the late hours of the night the visiting psychiatrist may find his hands full of trouble.

So much for problems. There are many more that we could relate and I am sure

some will appear in the future of which we have not thought.

The many pleasures and advantages of a psychiatric section in a general hospital, especially a teaching hospital, are quite obvious. To have one's patients in a place which houses all the necessary but expensive diagnostic instruments, such as x-ray and the electroencephalograph, as well as the various laboratories and operating rooms, is indeed a joy. Just last week a semi-disturbed woman with a chronic psychosis was admitted who was found to have a breast tumor of questionable malignancy. Frozen sections led to a tentative diagnosis of a benign lesion, but better studied sections reported on 24 hours later indicated malignancy. The next day a radical breast amputation was done and the postoperative care was handled in our section where the patient had learned to feel more secure and was better behaved.

When an occasional prefrontal lobotomy is indicated, the patient stays in the psychiatric section until wheeled to the operating room and the after care is resumed in a suitable environment, by nurses with psychiatric training rather than by general nurses. We, of course, have the advantage of the hospital consultants in every field and specialty. A central kitchen department can supply any diet—diabetic, salt free or high protein.

By rotating nurses in training through the department we are able to teach psychiatric concepts, which include good manners, patience, tolerance and smooth interpersonal relations. Our internes and residents learn to look upon the psychiatric patient as a real person, not an oddity, and they also learn much about the somatic repercussions of emotions, such as anxiety, anger, and sadness. Our fellow physicians are closer to us and, I trust, think better of us now. We are doctors treating patients, not mystic souls trying to solve the spiritual, philosophic and governmental ills of the world.

We have been able to demonstrate that psychiatric ills are treatable, that fair results can be expected, that psychiatric services are available at a not too unreasonable cost, and that hospitalization does not have to go on for months in every case.

We hope that we have been able to teach,

by example, a proper understanding of the other fellow's problem and a proper recognition of individual limitations, together

with a degree of emotional maturity and tolerance and humility which helps in the practice of medicine.

PRIVINE ADDICTION

W. H. BLANK, M. D., F. A. C. A.

Birmingham, Alabama

Numerous cases have been reported in which patients have become dependent upon Privine as a means of obtaining relief from intermittent nasal obstruction due to one of the allergies. This is to report another such case and to emphasize once more the necessity for restricting the too free use of this constrictor of the nasal membranes.

D. E. M., a 26 year old white male Naval officer, was seized with a sudden blocking of both sides of the nose while on board ship off Okinawa during June 1945. Discomfort was so marked and persistent that he was treated at once by the medical officer on board ship. This consisted for the most part of Neosynephrine $\frac{1}{4}$ per cent but the patient obtained very little relief at any time. He was therefore evacuated to the United States in November 1945. Skin tests revealed sensitivity to dust and feathers, and a program of desensitization was begun which, however, was discontinued after only 15 weeks. The patient started the use of Privine in January 1946 and obtained satisfactory relief. After some months he was on a schedule whereby he used the nose drops every 3 to 4 hours during the day and at least once every night, obtaining, however, less relief as time went on.

He continued to use Privine in this manner until seen by us in February 1949. At that time his nose was almost completely blocked bilaterally. The nasal mucous membranes, visualized only with difficulty because of the marked secondary edema, were boggy and typically allergic gray. On February 4th he was placed on a regimen consisting of Trimeton, delayed action Pyribenzamine and Neosynephrine $\frac{1}{4}$ per cent, as well as a rapid decrease in the use of Privine. Improvement was prompt and by February 11 the patient had completely cleared up. He had discontinued the Privine altogether several days previously.

Privine is an excellent agent for constricting the nasal membranes. Used in too large quantities and too frequently it often loses its beneficial effect and results in a secondary edema of the nasal membranes, whereupon the patient increases the use of the drug and sets up a vicious circle. It behooves the prescriber of this product to give the patient explicit instructions in its use in order to prevent this unpleasant condition.

910 Woodward Building.

Carcinoma of the Breast—A patient with an indefinite area of tenderness or soreness in the breast should be thoroughly examined and the findings recorded. Repeated examinations of two-week intervals may be necessary for comparison. Changes in the breast associated with the menstrual cycle are most important. In certain instances, the areas of induration or tenderness will be most pronounced during the premenstrual phase, with a complete subsidence during or after menses. It is the area of induration and soreness that is persistent after the menses that gives great concern. This signifies failure to regress and that there is now evidence of hyperplastic change. Thus, the patient should be examined during various phases of the cycle, and followed through at specific return dates. Only by careful follow-up will we be able to evaluate the individual breast problem. Patients about whom there is an element of doubt as to the presence of a neoplastic process should be submitted to surgical excision, with microscopic study of the excised specimen.

There are other primary diagnostic aids which may prove beneficial, such as cytologic films of secretion or blood from the breast, transillumination, aspiration, and aspiration biopsy.

Carcinoma of the breast apparently develops as a result of altered normal physiologic activity with a series of histologic changes. There are certain proliferative and hyperplastic changes which occur, and in some instances are representative of a step between a benign and a malignant process.—Wammoch, J. M. A. Georgia, Dec. '49.

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

G. T., age 4 months, was doing well until September 24 when he became quite restless and passed a stool with a few spots of blood in it. After this stool he began to vomit and vomited everything taken thereafter. All of the remaining stools were bloody mucus. This continued for two days. On September 26 when the mother changed the diaper she saw something protruding from the rectum which she thought was prolapse of the rectum. At this time he was brought to the Children's Clinic. A rectal examination revealed bloody mucus and an easily felt mass. He was very pale, dehydrated and in profound shock.

He was referred to Dr. J. O. Morgan immediately for operation for the intussusception and was given 100 cc. of citrated blood during the operation.

The following is a description of the findings at operation:

"The intussusception was reduced with the exception of the portion involved in the ileum. The distal two feet of the ileum and cecum were resected. The blood supply was ligated and an end to end anastomosis was carried out from the ascending colon and the end of the ileum."

Gross Findings: "Most of the ileum was moderately distended and the colon very dark. The blood vessels in the mesentery appeared to be partly thrombotic. A large portion of the ileum and part of the colon were invaginated in the descending colon, sigmoid and upper rectum. The distal portion of the ileum was gangrenous and could not be reduced."

The day following the operation the patient was given 100 cc. of citrated blood and 200 cc. of 5 per cent glucose intravenously. No fluid was given by mouth for 48 hours. Small amounts of milk and water at frequent intervals were started at this time and gradually increased daily.

He did well until about a week after the operation when he developed a very severe intestinal hemorrhage. The stool consisted of dark clotted blood. The hemoglobin was 20 per cent and the red blood count 1,200,000. He was given three transfusions at this time

and no further bleeding occurred. He has done well since.

COMMENT

This is a very unusual case of intussusception as I have never seen one before that I could feel on rectal examination or that prolapsed from the rectum. Stools of bloody mucus which never clots are almost pathognomonic of intussusception. The intestinal hemorrhage which occurred about a week after operation was possibly due to lack of blood supply to an area of the intestine caused by the thrombotic vessels. This blood was in clots when passed and was very dark, whereas the bloody mucus did not clot and was red. The majority of these cases occur around 4 to 6 months of age.

It is very important to make a diagnosis early and have the baby operated on immediately as this is a real emergency.

If the operation is not done the first 24 hours, the mortality percentage increases with every hour it is postponed.

Rupture of the Urethra—Early surgical intervention is essential in all cases of rupture of the urethra. Primary repair of the ruptured portion is ideal, but may be impossible to carry out due to the condition of the patient, and in some cases due to associated pelvic fractures. If primary repair is not possible immediately, cystoscopy is performed plus ample drainage of the areas of extravasated urine. In this case secondary repair of the ruptured urethra should not be delayed longer than absolutely necessary, because dense scar tissue will form at the site of rupture and make further repair extremely difficult.

If primary repair is considered feasible, the approach will depend, of course, on the site of rupture. If the rupture occurs in the bulbous portion, it may be exposed through the perineum and a search made for the torn ends of the urethra. If found, they should be approximated over an indwelling urethral catheter using a few sutures of fine chromic. Ample drains should be placed in all areas of extravasation before the incision is closed.—*Womack and Campbell, New Orleans M. & S. J., November 1949.*

ANNUAL SESSION
OF THE ASSOCIATION
THOMAS JEFFERSON HOTEL
BIRMINGHAM
APRIL 20-22

THE JOURNAL

of the

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February 1950

CHEMOTHERAPEUTIC AGENTS

"The development and clinical application of chemotherapeutic agents has progressed with bewildering speed in the few short years of their existence. Because of the astonishing anti-infective potency of these agents, it is easy to lose sight of the fact that these are highly specific drugs, each with a sharply delineated field of activity. Most therapeutic failures are readily attributable to mistaken choice of chemotherapeutic agent, improper use of the correct agent, or use in diseases for which no specific drug is available. Good results can be obtained only by selecting a drug known to be active against the infecting microorganism and by using one drug in sufficient dosage and for sufficient time. This presupposes determination of the etiologic agent at the earliest moment by clinical or laboratory methods. The blind trial of chemotherapeutic drugs in improperly diagnosed diseases is to be condemned. The least harmful result of such treatment is a waste of expensive drugs and delay of proper therapy. More serious may be the development of drug-resistant strains of bacteria as a result of improperly managed treatment. Furthermore, although the chemotherapeutic agents as a group are relatively free

of toxic effects, the unnecessary risk of such intoxication is not warranted."

The above is the opening paragraph of the recently published article by Brainerd¹ dealing with this important and timely subject. The San Francisco observer goes on to state: "In most infections due to gram-positive cocci, penicillin is the preferred drug." And also: "Penicillin is the most effective agent in gonococcal infections."

In dealing with the meningococci, Brainerd tells us that "A combination of penicillin and sulfonamide is more effective than either drug alone. Aureomycin and chloromycetin may also prove to be effective agents in meningococcal infections."

And we are also told that "Chloromycetin is by far the most effective drug in the treatment of infections due to the typhoid-Salmonella group, although aureomycin occasionally produces satisfactory results. Either aureomycin or chloromycetin are to be preferred to streptomycin and sulfonamides in the treatment of brucellosis.

"Sulfadiazine, at present, is preferred in the treatment of bacillary (Shigella) dysentery, but further clinical trial may demonstrate the worth of aureomycin and chloromycetin."

It is indeed heartening to read that "Excellent results may be expected in epidemic typhus, murine typhus, scrub typhus, Rocky Mountain spotted fever, Q fever, and rickettsial pox with aureomycin and chloromycetin. Both appear superior to para-aminobenzoic acid."

The author is of the opinion that with few exceptions virus infections are not affected favorably by any chemotherapeutic agent.

As to the sulfonamides, we are informed that "With the appearance of more potent and less toxic drugs, the sulfonamides are less often used alone and are more often combined with another antibacterial agent. Sulfadiazine and sulfamerazine are the most widely active drugs of this group and should be used to the exclusion of older sulfonamides. Since each sulfonamide is soluble in the urine independent of the concentration of others, the combination of two or more

1. Brainerd, Henry: The Proper Use of Chemotherapeutic Agents, Am. Practitioner 4: 226 (Dec.) 1949.

of these drugs materially lessens the possibility of precipitation in the urinary tract when each is used in fractional dosage. Freedom from serious toxic effects of the antibiotics should not lessen precautions to avoid agranulocytosis, hemolytic anemia, thrombocytopenia, and other serious results of sulfonamide medication."

And, finally, the author is certainly upon firm ground when he states that "The indiscriminate use of chemotherapeutic drugs without proper etiologic diagnosis is to be condemned."

AMERICA'S WAY

Every March the American Red Cross goes to the people of this country for support of its program. This program entails responsibilities decreed by federal statute, responsibilities of national and international scope that continue both in war and peace.

The response of the people is voluntary. It is for each individual to decide how much he can give of his time and his money to assist in carrying out these responsibilities. No one says what the individual must do.

Yet the people—in the little towns, in the rural districts, in the big cities—accept the challenge year after year and voluntarily make the Red Cross responsibilities their business. They take pride in shouldering their neighbors' burdens when the sudden hurricane, the forest fire, the flash flood sweep away homes and possessions. No one tells them they *must* help. They respond to the needs of their fellows in the pioneer spirit of helpfulness that is their heritage.

The response of Americans, not only at fund raising time but throughout the year, to every part of the Red Cross program—blood, safety, service to veterans and the armed forces and their families, nursing, disaster, international activities, and other services—is never failing.

The men in industries and professions, the women in homes and in the business world, the boys and girls in schools and colleges make up the American Red Cross and work through it, and give through it, with no sense of compulsion.

This is America's way.

CORRESPONDENCE

FIELD ARMY OF THE AMERICAN CANCER SOCIETY
ALABAMA DIVISION
907 RAMSAY-McCORMACK BUILDING
BIRMINGHAM 8, ALABAMA

December 13, 1949

Dr. Douglas L. Cannon
Editor-in-Chief
Journal of the Medical Association
of the State of Alabama
519 Dexter Avenue
Montgomery, Alabama

Dear Dr. Cannon:

I wonder if you could give a little notice in the Medical Journal to the fact that the second film in the Medical Series is now available. It is entitled: "Breast Cancer: The Problem of Early Diagnosis."

The first print was previewed in Washington, D. C., on Monday, December 5th, at the Interim Session of the American Medical Association, and was accorded enthusiastic response by both the audience and the press.

A print will be available on loan, free of charge, from this office, after January 1st, and we would be very happy to send it to any of the Medical Societies in the State if they will request it.

The first Medical Film, "Cancer: The Problem of Early Diagnosis," has been awarded first prize in the division of films on medicine and science by the 10th International Exhibit of Cinematographic Arts.

We have had very little call for this in Alabama, and I'm wondering if the doctors do not realize this film is available. Where it has been shown it has been received most enthusiastically.

Both films may be borrowed from this office upon request from any Medical Society. I would appreciate it if you could get this message to the doctors through the Medical Journal.

Sincerely yours,
Mrs. Lillian G. Meade,
State Commander.

THE MEDICAL COLLEGE OF ALABAMA
A DIVISION OF THE UNIVERSITY OF ALABAMA
BIRMINGHAM 5, ALABAMA

December 27, 1949

Dr. Douglas Cannon, Editor
Journal of the State Medical Association
519 Dexter Avenue
Montgomery, Alabama

Dear Dr. Cannon:

Dr. Gallalee has asked me to transmit to you for publication in the Journal a news item, which is as follows.

According to a recent decision of the Alabama Supreme Court, if a scholarship from a county is awarded in either the School of Medicine or the School of Dentistry to a student from that county, such award can be made for any number of years, up to the entire four years of enrollment. Once the award, however, has been made to a student it cannot under any circumstances be revoked

either by the County Board of Commissioners or the County Medical Society.

I would appreciate very much your publishing this item in the next issue of the Journal. Thanking you and with kindest regards, I am

Yours sincerely,
Roy R. Kracke, M. D.,
Dean.

ASSOCIATION ITEMS

DR. ROBINSON SUCCEEDS DR. NOLAND

The appointment of Dr. E. Bryce Robinson, Jr., as superintendent of the Tennessee Coal, Iron and Railroad Company's Department of Health has been announced by Robert Gregg, TCI president.

Dr. Robinson, assistant superintendent of the department since 1946, succeeds the late Dr. Lloyd Noland, who died November 27.

As head of the health department, Dr. Robinson will direct the functions of the TCI Employees Hospital at Fairfield, the company's 13 dispensaries and the Sanitation Division.

Dr. Robinson, who resides at 4330 Cliff Road, was born in Selma, Ala., on September 6, 1910. He was reared in Talladega, Ala., where his father, the Rev. Mr. E. B. Robinson, Sr., now retired, was superintendent of the Presbyterian Home for Children for 35 years.

After earning his B. S. degree at Davidson College, Davidson, N. C., in 1932, Dr. Robinson received his M. D. degree at Tulane University, New Orleans, in 1936. He came to the TCI Employees Hospital July 1, 1936, and, after serving his internship and residency, joined the hospital staff as Chief of the Anesthesiology Department.

Dr. Robinson went on military leave June 15, 1941, to report for active duty as a captain in the Medical Corps of the United States Army. His overseas service included action in the North African, Sicilian and Italian campaigns, and his decorations include the Legion of Merit and the Purple Heart. He attained the rank of lieutenant colonel before returning to civilian life on January 7, 1946, at which time he resumed his duties with the Tennessee Company.

His professional affiliations include membership in the Birmingham Surgical Society, the Birmingham Clinical Club, the Jefferson County Medical Society, the Medical

Association of the State of Alabama, the American Medical Association and the American Society of Anesthesiology. He is a fellow in the American College of Anesthesiology and a diplomate of the American Board of Anesthesiology.

Dr. Robinson is also a member of the South Highlands Presbyterian Church and of the Birmingham Country Club. His wife is the former Margaret Allen Wallis, of Talladega, and they have two daughters, Mary Wallis and Margaret.



Dr. E. Bryce Robinson, Jr., whose appointment as superintendent of the Tennessee Coal, Iron and Railroad Company's Department of Health has been announced by Robert Gregg, TCI president.

RECENTLY NAMED FELLOWS INTERNATIONAL COLLEGE OF SURGEONS

The following named surgeons from Alabama were made Fellows and Associate Fellows in the United States Chapter, International College of Surgeons, at the Convocation ceremonies held during the Fourteenth Annual Assembly of the College in Atlantic City, New Jersey, November 7-11, 1949.

Certified Fellows:

Karl Burton Benkwith, M. D., Montgomery
Charles N. Carraway, M. D., Birmingham
Edward Lee Gibson, M. D., Enterprise
Claud Johnson, M. D., Montgomery
Elias Noah Kaiser, M. D., Montgomery
Paul Stahl Mertins, Jr., M. D., Montgomery
Samuel R. Terhune, M. D., Birmingham
Asa Greenwood Yancey, M. D., Tuskegee
Lewis R. Gayden, M. D., Montgomery

Advanced to Rank of Certified Fellow:

John T. Ellis, M. D., Dothan
Walter G. Haynes, M. D., Birmingham

Associate:

Samuel Wilburn Windham, M. D., Dothan

Advanced to Rank of Associate:

Claud M. Warren, Jr., M. D., Mobile

DR. CHAMP LYONS COMES TO ALABAMA

Dr. Champ Lyons, New Orleans, Louisiana, Associate Professor at Tulane University, has been appointed Professor and Chairman of the Department of Surgery on a fulltime basis at the Medical College of Alabama, effective January 1, 1950. Dr. Lyons will replace Dr. J. M. Mason, who now holds the rank of Professor Emeritus.

MEETINGS

The Georgia Society of Ophthalmology and Otolaryngology will hold its annual meeting at the General Oglethorpe Hotel in Savannah, March 3-4, 1950.

Members and guests are invited to make their reservations directly with the hotel. Registration fee for the lectures is \$20.00.

The distinguished lecturers and their subjects are: Dr. Bayard T. Horton, Rochester, Minnesota, "Treatment of the Dizzy Patient" and "Headaches—Common Varieties and Their Treatment"; Dr. John M. Converse, New York City, "Treatment of Acute Maxillofacial Trauma" and "Rhinoplasty"; Dr. Mercer G. Lynch, New Orleans, La., "Carcinoma of the Larynx and Methods of Approach, Including Lynch Suspension" and "Radical External Sinus Operations"; Dr. Meyer Wiener, Coronado, Calif., "Medical Ophthalmology" and "Surgical Ophthalmology"; Dr. Milton L. Berliner, New York City, "Slit Lamp Microscopy"; Dr. Wendell L. Hughes, Hempstead, N. Y., "Lid Reconstruction" and "Personal Procedures in Ophthalmology."

SOUTHEASTERN SURGICAL CONGRESS

The Postgraduate Surgical Assembly of the Southern Surgical Congress will be held at the Shoreham Hotel, Washington, D. C., March 6, 7, 8 and 9. For information regarding the Assembly, Dr. B. T. Beasley, 701 Hurt Building, Atlanta, may be communicated with.

Alabama physicians who will be guest speakers are: Dr. Gilbert F. Douglas, Birmingham and Dr. William F. Harper, Selma.

CANCER SEMINAR

"Cancer—A Personal Problem" will be the topic of the keynote address at Alabama's Cancer Seminar in Birmingham February 21, when Dr. Charles S. Cameron, Jr., of New York, medical and scientific director of the American Cancer Society speaks at the dinner at Hotel Tutwiler.

Although the seminar is planned primarily for Alabama physicians and surgeons, advance indications are that a large number of out-of-state doctors also will attend the sessions on February 21, 22 and 23.

The Seminar will be conducted by ten men widely recognized in their fields, including Dr. Louis H. Clerf, Philadelphia; Dr. Frank Adair, New York; Dr. Oliver S. Moore, New York; Dr. A. N. Arneson, St. Louis; Dr. William F. Reinhoff, Baltimore; Dr. Lloyd F. Sherman, Philadelphia; Dr. Sidney Farber, Boston; Dr. Ralph M. Caulk, Washington, and Dr. Alexander Brunswick, New York.

Headquarters for the Seminar will be Hotel Tutwiler. Other nearby hotels which will provide reservations for delegates are Hotel Molton and Hotel Redmont. Room reservations should be made direct with hotels.

Reservations for the dinner at which Dr. Cameron will speak should be made through the office of the Alabama Division, American Cancer Society, 907 Ramsay-McCormack Building, Birmingham 8, Alabama, and should be accompanied by a check for \$3.50 per plate. Dinner reservations will be accepted through February 18.

The Seminar, first of its kind to be held in Alabama, is sponsored jointly by the Medical Association of the State of Alabama, the Jefferson County Medical Society, and the Alabama Division of the American Cancer Society.

Dr. Karl F. Kesmodel, of Birmingham, is chairman of the American Cancer Society's Committee on Arrangements.

With the exception of the dinner, all ses-

sions will be held in the auditorium of the Medical College of Alabama. There will be no registration fee for the Seminar, Dr. Kesmodel said.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

IT'S AN OLD GAME

W. A. Dozier, Jr.
Director of Public Relations

Recently some of the proponents of compulsory sickness insurance stated that only parts of their program would be pushed and the rest left until a later date. At some future time the remainder of the program could be legislated after there is a more receptive attitude on the part of many people and less concentrated opposition.

When such a statement was made, many who have been actively opposed to present administration plans in health heaved a sigh of relief. The strain was off. Once more they could settle back into their pleasant lethargic ruts and allow time to slip quietly by. Such a reaction was just what was hoped for by the planners. This strategy of taking by parts instead of storming the whole field has been used for hundreds of years. The Roman general, Quintus Fabius Maximus, avoided decisive battles against Hannibal as a protective measure for Rome.

We do not have to go back that far, however, for a classic example of the technique. In 1884 the Fabian Society was formed in England. Its aim was gradually to spread socialism and its principles in England. It was a slow process, but the so-called Fabian Socialists were finally in complete power and have been for several years now.

Why is this technique so effective? Primarily because of human nature. We cannot seem to keep our interest and our thoughts too long on one thing. Our minds go on to other subjects, and the old fight doesn't seem so important. We also look at the overall picture and decide one small part isn't too important. We still have the major situation well in hand. We forget that everything may be broken down into component parts—all small. Yielding of one here and

one there soon places us in a precarious position that may easily be lost.

If the results are worth working for, planners can bide their time and wait for those desired ends. That is the professed game they are playing. It's an old game all right, but an effective one.

Acute Cholecystitis—Acute cholecystitis is one of the more common complications of the gallbladder. While such a complication in the past has been responsible for a serious increase in the operative mortality, this risk has been somewhat reduced by the use of antibiotics such as penicillin. It is our policy, however, to regard every case of acute cholecystitis as an emergency and to operate as early as consistent with the patient's general condition. We believe that acute disease of the gallbladder should be regarded as an acute abdominal emergency. The patient should be admitted to the hospital immediately and operation carried out as soon as the diagnosis is established, as soon as the patient's general condition can be evaluated, and as soon as the chemical and fluid balance can be restored. It is encouraging to note in the literature the increasing preference for early operation in acute cholecystitis, and early operation is now almost universal.

The majority of cases of acute cholecystitis consist of an acute inflammatory process arising in long-standing chronic gallbladder disease with stones. Much of the danger of acute cholecystitis could be avoided if chronic cholecystitis with stones were recognized early and operation performed during the chronic stage. It is well recognized that the operative morbidity and mortality of acute cholecystitis is somewhat greater than that of elective surgery on the gallbladder. If the presence of gallstones could be determined by diagnostic procedures before the onset of an acute inflammatory process, much of this increased risk could be avoided. We believe that if early operation is carried out, cholecystectomy can be done in the majority of cases and is the operation of choice. In a group of 74 patients with acute disease of the gallbladder whom Phillips and I studied, 73 had cholecystectomy. Cholecystostomy, however, is a valuable procedure and can be life-saving, particularly in elderly patients or those in poor condition.—*Marshall, Texas State J. Med., Jan. '50.*

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

Notice To All Convention Representatives Who Make Written Reports

It is requested that all reports be written on the typewriter, double-spaced on regular size white paper (size 8½" x 11"). Please make three copies, one to be kept by the writer and the other two to be sent to the State President. These reports will be uniformly complied in booklet form, one set to be sent to National Headquarters and the other kept by the State Association.

These reports are to be in the hands of Mrs. W. J. Rosser, 2721 Hanover Circle, Birmingham, Alabama, not later than April 10.

Special Notice

The 1950 Convention of the Auxiliary will be held in Birmingham on April 20 and 21. All state officers, state committee chairmen and delegates from county Auxiliaries are urged to make reservations for hotel accommodations without delay.

Convention headquarters for the Auxiliary will be the Tutwiler Hotel. It is suggested that reservations made at the Molton, Redmont and Tutwiler Hotels will be most convenient for Auxiliary members.

The opening business meeting of the convention will be at 2 P. M. on Thursday, April 20, and it is necessary for all outgoing and incoming state officers and committee chairmen to attend this meeting. They are asked to come prepared to remain over all day Friday.

The regular business session of the convention which all state officers, committee chairmen and delegates are to attend will begin at 9 A. M., Friday, April 20.

The complete convention program will appear in the March Medical Journal.

Excerpts from the Constitution

At this particular time of the year may we call your special attention to parts of the Constitution of the Woman's Auxiliary to the Medical Association of the State of Alabama. (Please carefully note this name as correctly written.)

Article VII—Elections

A. The officers of the Auxiliary shall be elected annually at the April meeting by ballot. A majority of all votes cast shall be necessary to constitute an election. However, where there is but one candidate for an office the secretary may, by unanimous consent, cast the ballot.

B. A nominating committee of three shall be elected at least one month prior to the annual meeting to present a list of officers. Nominations from the floor shall be in order.

Article VII—Meetings

A. The April meeting shall be the annual meeting and at this meeting officers shall be elected and annual reports of officers and committees heard.

Article VIII—Dues

The membership dues shall be \$2.00 per year payable not later than March first. Members-at-large also pay \$2.00 March 1st; \$1.00 to go for National dues, \$1.00 for State dues. (The treasurers of county Auxiliaries will please have their membership dues in the hands of Mrs. James R. Chandler, South 14th St., Bessemer, Alabama, not later than March 1, as stated in the constitution.)

Article I—Representation

The Auxiliary is entitled to send its president and two delegates or their alternates as its representatives to the Annual State Auxiliary Convention. These delegates must be members in good standing. (Auxiliary presidents will please send the names of their convention representatives to Mrs. W. J. Rosser as soon as possible.)

Are You a Voter?

If you are an Auxiliary member in the state of Alabama who, for one reason or another, has failed to register as a voter, or if you have failed to pay your poll tax before the deadline, resolve not to let this happen again. As good citizens, who command the respect of those about us, it is our responsibility to be voters. If we are to stand united for or against issues concerning our

country, we must have a voice in our government. Make it a goal in your Auxiliary that every member be a VOTER.

Do you know about the League of Women Voters in the United States? The purpose of this organization, whose national membership is 90,000, is to promote political responsibility through informed and active participation of citizens in government. Its policy is taking action on governmental issues—local, state and national—in the public interest. It shall not support or oppose any political party or candidate. Its program is designed to help promote political responsibility of individual citizens by 1. providing information, 2. building public opinion, and 3. supporting legislation.

If it is not possible for every Auxiliary member to belong to this organization, then see to it that some one in your unit is affiliated in order that she may bring to your members the true facts about government legislation.

Are You an Auxiliary Member?

In past issues of the Journal it has been urged that every Auxiliary strive for a larger membership. We have tried to explain the necessity of a growing membership, if our organization is to have strength. The underlying fact is that if the wives of doctors are to be a help to their husbands and their profession, she simply must be well informed on vital questions of the day which so definitely will affect him. It is regrettable to admit that the average wife busies herself so completely with the routines of home life that she does not take time to read and understand fully what is happening in government that ultimately might affect the very home she is building.

In becoming a member of an organization the purpose of which is to educate its membership and whose programs are planned accordingly, she will absorb information that will materially govern her thinking. Be an interested member, and if your interest is lagging, examine yourself before you criticize the organization. Could it be that you have gotten mentally lazy, that you find yourself not wanting to try to understand and think any question through seriously? Do you find yourself wanting only the social life outside your home? If you are, you will

probably be offended by the following remark. You are as guilty in not doing the thing every good citizen should do as those who are striving to tear down everything that the democratic form of government represents. We all must become wide awake, for those around you look to your guidance as completely as they do to your husband. Be satisfied only when you have become good leaders.

Can the Auxiliary Help in This Situation?

The American people are not receiving adequate nursing care. One out of every ten Americans was hospitalized in 1947. This means that one person went to a hospital every two seconds. Between 1936 and 1946 hospital admissions increased 75 per cent. Two babies out of three born in America are now born in hospitals. In this same ten-year period hospital births increased 157 per cent. More than 40,000,000 Americans belong to the Blue Cross and similar hospital insurance groups, eleven times as many in this same ten years. Result: More and more nurses are needed.

The supply of nurses has not kept pace with the increasing demand for service. Young women are not entering the nursing field in sufficient numbers. Many of those who do enter schools of nursing drop out before graduation. There are two major reasons why nursing is not attracting properly qualified women. They are the lack of economic security in nursing, and the lure of other jobs and of marriage.

Nurses do not have economic security. Most nurses are not covered by the Federal Social Security Act. This law does not apply to employees of charitable and other non-profit organizations. Also, the law does not cover persons self-employed, such as private duty nurses.

Low salaries, long hours, and limitations on their private lives are a few of the reasons why some nurses are leaving the profession. Nurses must have more economic security and fewer restrictions if the profession is to continue to attract recruits.

The Alabama State Nurses' Association states that we must do something about this, and that immediate steps should be taken to overcome this shortage of nurses. The Association gives the following seven-step plan for immediate action.

1. Recognize the State Nurses' Association as the legal representative of the professional nurses in all matters affecting their salaries.

2. Set statewide minimum salary standards.

3. Pay nurses cost salaries. Do away with forced acceptance of food, quarters, and laundry instead of pay.

4. Set a 40-hour week, without split shifts, and with overtime pay.

5. Begin a modern program of tenure, merit pay increases, vacations, sick leaves, health service, maternity leaves, educational leaves, and a retirement plan.

6. Have negotiated and written contracts.

7. Amend the Social Security Act to cover all nurses.

The American people will benefit by better nursing service. Nursing will be more stable. Hospitals will have larger staffs. Nurses will have better working conditions and higher morale.

The forty per cent of the American people who live in the country receive only 12 per cent of the nation's nursing care. In 1946 there was a nation-wide average of one registered nurse for every 440 people, whereas city folks had almost five times as many available nurses. This situation exists because nurses would rather live in cities where there are hospitals and professional and educational facilities. Opportunities for recreation are more varied in cities and the salaries are slightly higher. In some places registered nurses have to spend much time on non-professional work, such as cleaning wards, clerical work, making beds, carrying food, and transporting patients. All too often nursing care is available only to those who can afford it and not to all who need it.

The Association says we can do something about this. We must make rural nursing conditions more attractive. Equal pay, facilities and opportunities should be provided. Counselling services will place the right nurse in the right job. Nursing skill will be used where it is most needed.

News from Our New Auxiliaries

The Auxiliary to the DeKalb County Medical Society, of which Mrs. Claude D. Killian is president, which organized last August with six members, now has a membership of eleven. It is hoped that there will be two more members within the very near future.

On November 14, at a luncheon meeting, Mrs. J. C. Chambliss, State Chairman of the

Doctor's Day Committee, and Mrs. J. G. Daves, State President-Elect, were guest speakers. An interesting program was presented, and an enjoyable time had by all those present. On that same evening Mrs. Killian and Mrs. McDow spoke to the colored P. T. A. on Health Education.

In December, Auxiliary member, Mrs. Guest presented an excellent paper on the Medical History of Alabama.

The material used in preparing programs for the Auxiliary meeting is taken from that sent by Mr. Dozier of the Public Relations Office. Mrs. Killian is most anxious to have suggestion from other Auxiliaries.

* * *

Mrs. J. H. Colley, President of the Auxiliary to the Pike County Medical Society reports that the Auxiliary was organized this fall through the efforts of Mrs. W. J. Rosser. Mrs. Rosser visited the community, told of the work of other Auxiliaries, and why Pike should have one here. Several of the doctor's wives were able to attend the State meeting in Birmingham, which was most enlightening.

The meetings are held each month at the home of one of the members, one of whom discusses legislation, and another gives some topic which will be informative and interesting. Even though the group is small, this year is being spent in promoting greater understanding and friendliness among the members. The Pike Auxiliary is also attempting to make the general public aware of the organization, so wherever it may give helpful assistance it will be called on to do so.

It is hoped that by next year the Auxiliary will be better equipped to further the promotion of health in the community and greater interest and cooperation in the Auxiliary can be exhibited.

* * *

Congratulations to Mobile for the excellent work it is doing on its legislative program. Mrs. George Newburn, Jr., President, and her assisting officers, committee chairmen and co-operating membership deserve much credit for the success of the Rally Meeting at which Senator Hill was speaker. All doctors, druggists and their wives were invited. Mrs. Newburn, won't you write for the Journal some of the details of the rally? We all would like to know more about it.

Further congratulations go to Mobile for having received a resolution from the University Women regarding their stand on the Compulsory Health Program.

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The Montgomery County unit is happy to announce that Dr. W. W. Bauer, Director of the Bureau of Health Education of the American Medical Association and Editor of *Hygeia*, The Health Magazine, will be its guest on the 6th, 7th and 8th of March. Dr. Bauer is scheduled to address the following organizations: Montgomery County Medical Society, the Rotary Club, the Kiwanis Club and Jr. Chamber of Commerce, who will hold a joint meeting at that time, and Huntingdon College. We all look forward to his coming with great interest.

Mrs. Peter Vredenburgh, Democratic Committee Woman, spoke before the Auxiliary on the 20th of January, having for her topic "The Rugged Life of the Doctor's Wife." Following the luncheon the study

group remained to hear papers presented by Mrs. J. H. Farrior, her topic being "Progress of Medicine in Alabama and the Program for Good Health." Mrs. Fred Reynolds presented a paper discussing the Blue-Cross-Blue Shield plan of hospital and surgical insurance.

On February 17 the guest speaker of the Auxiliary will be Dr. Edgar G. Givhan, Jr., Birmingham, President-Elect, Alabama Heart Association. At this meeting Dr. Paul S. Mertins, President of the Montgomery County Medical Society will be guest of honor.

The Auxiliary is assisting the Heart Association in having its members, under the direction of Mrs. J. Sam Smith and Mrs. J. M. Barnes, compile a list of business establishments where Plastic Hearts will be placed during the annual appeal for funds and will see that the hearts are delivered and picked up following the close of the drive.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

VICTORY OVER MALARIA

Some twelve years ago the director of the State Health Department's Bureau of Sanitation was talking about his work to a new member of the staff. The conversation led, naturally enough, to malaria.

"In this kind of work," that malaria control enthusiast, now dead, emphasized, "you don't think of this year or next. You don't even think of the next ten years. You think many years ahead. What we are doing to lick malaria in Alabama probably will not show much in the way of immediate results. But we're working for the future. Twelve or fifteen years from now, you'll see what I'm talking about. You'll see a difference in the malaria situation in Alabama."

He turned out to be an excellent prophet. For there has been a great change in the malaria picture both in Alabama and in other parts of the country. There have been downswings and upswings in the reporting

of cases. There have been good years and bad years, as far as this disease is concerned. But the long-time trend has been definitely downward. And now at last, it seems safe to say, perhaps with one's fingers crossed, that malaria appears to be on the way out as an important factor in the health and economic picture of Alabama and probably other states as well.

The State Health Officer brought the good news to the people of Alabama in a public statement issued a short time ago. He said:

"Malaria is said to have played a part—an important part—in the fall of Greece and Rome. It has caused more wars to be won and lost than many world-famous generals. During World War I it practically immobilized whole armies on both sides, rendering them virtually as impotent as though their troops had been returned to civilian life. Because of the sickness, impaired personal efficiency and general social backwardness it caused, malaria was largely responsible for President Roosevelt's calling the South 'the Nation's Economic Problem No. 1.' As recently as 1938 malaria was such a serious health and economic problem that the National Emergency Council estimated that it had reduced the South's industrial output by one-third. But malaria seems at last to have met its match, at least in

Alabama. Unless there is an unexpected return to earlier conditions, the time is in sight, if indeed it is not already here, when it will figure in the health and economic picture about as importantly as typhoid fever and smallpox. It will need to be watched, just as those other diseases must be. But it will no longer be necessary to pay heavy tribute to malaria in bad health, staggering economic loss and general backwardness."

There is ample basis for the State Health Officer's optimism, malaria-wise. The records covering the reporting of cases of this and other diseases tell a pleasing and promising story.

It is difficult, indeed impossible, to obtain anything like complete reporting of malaria cases. This is easily realized when the matter is fully understood. The reporting is done by physicians. Naturally, the only cases they report—whether of malaria or of some other disease—are those they are called upon to treat. Because such a small percentage of malaria cases result in acute illness, comparatively few malaria patients consider it necessary to obtain medical care. Even when the disease is seriously affecting their general feelings and reducing their working efficiency, they may not feel sick enough to stop work, go to bed and send for their family physicians. Many others who realize they have malaria go in for self-treatment, using drugs widely advertised for this condition. Naturally, such cases are not reported. In turn, the epidemiologic records do not tell anything like the complete story of malaria prevalence.

In spite of incomplete reporting, the records show that more than 6,000 Alabama cases were reported in 1938. Following the familiar pattern of upswings and downturns, reported cases increased sharply to nearly 9,500 in 1940. And then, or about then, something began to happen to malaria in Alabama. Reported cases dropped under 3,000 in wartime 1944, fell to 1,541 in 1946 and then kept going down and down. In 1948 only 270 cases were reported. And only 133 were reported during the first 11 months of 1949.

All of that means: In 1938 malaria cases were reported at an average rate of about one every hour and a half. In 1948 they were reported at an average rate of about one every 32½ hours.

It is difficult to say exactly what has brought about this sharp reduction in the prevalence of a disease that has plagued this part of the country, presumably, since soon after the white man came. Since *Anopheles quadrimaculatus* mosquitoes are the chief vector here, it would be natural to attribute the decline to the DDT campaigns against that insect. And no doubt they have played a part, indeed an important part. So have drainage programs aimed at drying up swamps that serve as prolific breeding places for that and other types of mosquitoes. So has the screening of houses and places of business. So have other programs aimed at reducing the chances of infection. But it does not seem correct to attribute the present happy situation to either of these things. Nor, presumably, is it a product of the cycle of peaks and valleys of malaria incidence. For the present low incidence is not in keeping with such a cycle. We, frankly, do not know what is responsible. It may be, and probably is, the collective fruits of all the things that have been done to combat malaria. It may be just the fulfillment of that public health engineer's prophesy, made in 1937 or 1938. The seeds he and his fellow-workers were planting then, aided by seeds that have been planted before and since, are bearing rich fruit.

You probably will ask: "Will this relative freedom from malaria last? Or will there be a return to the old conditions next year or the year after or ten years from now?"

There is no one—doctor, sanitarian or anyone else—with the answer to that question. It is in the tightly closed book of the future. But those who have been leading this fight are hopeful. They believe the gains registered will be permanent. They will not be particularly surprised or disappointed if there is an increase in reported cases. There may indeed be a sharp increase in such cases. For this is an unpredictable enemy we are dealing with. But there seems solid basis for the hope that the long-time outlook is good. They believe malaria's long reign as a sapper of energy, destroyer of wealth, and enemy of social progress is virtually at an end.

The National Emergency Council's report on the South, to which the State Health Officer referred in the statement quoted ear-

lier in this paper, was submitted to President Roosevelt on July 25, 1938. As already indicated, it told a disturbing story of malaria's harmful effects in this section. It might be interesting to consider that report in some detail, in the light of the present apparent victory over the disease.

It listed five forms of illness as playing particularly important roles in keeping the South "the Nation's Economic Problem No. 1." Each of the five came in for discussion. But syphilis, certainly an important problem, then as now, rated only a single paragraph. Pellagra was disposed of in six lines. What was said about pneumonia and tuberculosis together required, like syphilis by itself, just one paragraph. But it required three fairly long paragraphs—filling nearly a full printed page—to tell what the National Emergency Council thought of malaria and its role in the South's well-being.

It declared:

"The presence of malaria, which infects annually more than 2,000,000 people, is estimated to have reduced the industrial output of the South by one-third. One of the most striking examples of the effect of malaria on industry was revealed by the Public Health Service in studies among employees of a cotton mill in eastern North Carolina. Previous to attempts to control malaria, the records of the mill one month showed 66 looms were idle as a result of ill health. After completion of control work, no looms were idle for that reason. Before control work, 238,046 pounds of cloth were manufactured in one month. After completion of the work production rose to 316,804 pounds in one month—an increase of 33½ per cent.

"In reports obtained in 1935 from nine lumber companies, owning 14 sawmill villages in five Southern states, there was agreement that malaria was an important and increasing problem among the employees. During the year 7.6 per cent of hospital admissions, 16.4 per cent of physician calls, and 19.7 per cent of dispensary drugs were for malaria. The average number of days off duty per case of malaria was nine, while days in the hospital for the same cause were five. Ten railroads in the South listed malaria as an economic problem and a costly liability. Four utility companies had full-time mosquito-fighting crews at work during the year. The average cases admitted to a company hospital lasted three days and the average number of days off duty because of malaria was 11. Each case of malaria is said to have cost the company forty dollars.

"If we attempt to place a monetary value on malaria by accepting the figure of \$10,000 as the value of an average life and using the death rate of 3,943 for malaria reported by the census of

1936, the annual cost of deaths from this disease is \$39,500,000. To this figure could be added the cost of illness, including days of work lost."

Only 15 Alabamians succumbed to malaria in 1948. Two hundred and twenty-seven did so in 1938. Two hundred and ninety-one did so in 1928 and 376 in 1918. Put another way, about one Alabamian out of every 204,000 died from this cause in 1948. One out of every 12,000 did so in 1938. One out of every 6,000 did so in 1918. If the ratio of malaria deaths to population had been the same in 1948 as, say, in 1918, Alabama's malaria deaths would have been, not 15, but 497. Using the National Emergency Council's estimate of \$10,000 for each human life lost or saved, this state may be said to have been better off, in a financial sense, by \$3,610,000 than it would have been had no progress been made in the conquest of this disease.

But of course human well-being cannot be estimated entirely in cold mathematical terms. No statistics can measure the happiness of having a father live who otherwise would have died. There is no adequate measuring stick to tell us exactly how much better off a person is to be working efficiently than to be competing on unequal terms with such a person. And who can say, in terms of physical measurement, what it means to be feeling mentally and physically alert, instead of sluggish and dull?

Alabama people began to find out what these differences mean years ago, when the medical profession and the public health agencies began making headway against malaria. They have been finding out increasingly these last few years. And now we hope we are about to find out what it means to be virtually free from malaria. Needless, to say, the sensation will be a pleasant one. We can only hope it lasts.

As tuberculosis, in some aspect, is the concern of every practitioner in whatever specialty, so its teaching is the responsibility of the entire medical faculty. The phthisiologist's concern is with the segment of the problem which lies within the field of internal medicine. As the thoracic surgeon is primarily a surgeon, so the phthisiologist is primarily an internist. The more he can participate with other internists in joint clinical research and teaching enterprises the better will be the education of the students who are under their mutual guidance.—*Carl Muschenheim, M. D., Am. Rev. Tuberc., July 1949.*

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949

	Oct.	Nov.	*E.E. Nov.
Typhoid	3	2	5
Typhus	22	11	35
Malaria	17	11	157
Smallpox	0	0	0
Measles	10	77	38
Scarlet fever	87	107	121
Whooping cough	33	43	67
Diphtheria	62	56	93
Influenza	69	97	161
Mumps	19	47	37
Poliomyelitis	32	14	4
Encephalitis	1	1	0
Chickenpox	15	62	65
Tetanus	3	3	4
Tuberculosis	206	171	215
Pellagra	3	3	3
Meningitis	6	11	8
Pneumonia	108	106	125
Syphilis	643	526	1251
Chancroid	27	14	13
Gonorrhea	566	358	478
Tularemia	1	1	1
Undulant fever	8	10	4
Amebic dysentery	3	1	1
Cancer	393	367	173
Rabies—Human cases	0	0	0
Positive animal heads	23	26	0

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

DECEMBER 1949

Examinations for diphtheria bacilli and Vincent's	321
Agglutination tests (typhoid, Brill's and undulant fever)	858
Typhoid cultures (blood, feces and urine)	275
Examinations for malaria	199
Examinations for intestinal parasites	3,609
Serologic tests for syphilis (blood and spinal fluid)	21,298
Darkfield examinations	6
Examinations for gonococci	1,699
Examinations for tubercle bacilli	2,399
Examinations for meningococci	1
Examinations for Negri bodies (microscopic)	71
Water examinations	1,330
Milk and dairy products examinations	4,554
Miscellaneous	167
Total	36,781

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

OBSERVATIONS ON NATURALLY RESISTANT HOUSEFLIES IN ALABAMA

Contributed by

Claude P. Owens, B. S.

O. V. Lopp, M. S.

and

W. H. Kittrell, M. P. H.

Much has been said in the last two years concerning the appearance of so-called "DDT resistant flies" in many localities following several applications of DDT as a residual insecticide directed chiefly at the control of mosquitoes and houseflies. Public acceptance of this viewpoint has been largely due to the wide publicity given to the results of various laboratory experiments which show that flies acquire resistance to DDT. On the other hand, results of investigations which have not been given much publicity indicate quite clearly that some flies possess a high natural resistance to DDT, although there is no evidence that DDT was ever used in the locality where they exist. Obviously the term "resistant" is a relative one, with different flies exhibiting many different gradations of resistance, just as there are gradations of weak and strong individuals of any species.

King and Gahan (1949) compared the DDT resistance of flies collected from three dairy barns with the DDT resistance of flies taken at three city dumps. The three dairies

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

By now it must be plain that the fight against tuberculosis is a social and economic movement as well as a disease problem. We now have enough information to be confident that an awakened awareness of the people is the chief tool for triumph.—Francis J. Weber, M. D., Ohio Pub. Health, Feb. 1948.

The family's reaction and attitudes toward the patient's tuberculosis can have a decided effect upon the progress of his treatment. The members of the family, as well as the patient, need education as to the meaning of the disease and must be particularly aware of their role in enabling the patient to remain in the hospital until treatment is completed.—William B. Tollen, Ph. D., VA Pamphlet 10-27, Oct. 1948.

had received frequent spraying with DDT, but there was no record to indicate that any of the city dumps had ever received DDT treatment. The flies from both dairies and dumps were also compared with flies from the regular laboratory colony which had never been exposed to DDT. The following is quoted from the authors' findings: "Flies from the dumps were considerably more resistant than the laboratory colony, and one of these stocks showed somewhat greater resistance than the stock from one of the dairies, although the dumps were not known to have been treated with DDT." King and Gahan expressed the opinion that the relatively high resistance exhibited by the flies from the dumps may be explained by the fact that previous generations of these flies had probably been exposed to DDT in other places.

During the late summer of 1949 the authors of this article carried out a group of field experiments in several parts of the state of Alabama. One of the purposes of these experiments was to assist in determining the effectiveness in housefly control achieved by the DDT Residual Spray Program operated jointly by the U. S. Public Health Service, Communicable Disease Center, and the Alabama State Department of Health. This program, from the standpoints of materials used, methods of application, and selection of treated areas, is designed primarily for malaria control. However, housefly control has become an important feature of this program, since popular acceptance of, and local participation in, the program has been based to a considerable extent on the reduction in housefly populations.

The equipment used in the investigations consisted of the standard fly testing kit developed by the Technical Development Division of the Communicable Disease Center, Savannah, Georgia, and furnished to the state of Alabama for use in fly investigations. In brief, the kit consisted of four general parts: a fly holding cage, a device for transferring a given number of flies to a Petri dish cage, a series of Petri dish cages for exposing contained flies to sprayed surfaces, and several plywood panels treated at the laboratory with the standard dosage of 200 mg. of DDT per square foot. The kit was intended for use in investigating

householders' complaints regarding effectiveness of DDT applied in the Residual Spray Program. However, when no specific fly complaints were received, it was decided to investigate the effectiveness of DDT in sprayed houses chosen at random, and also to make observations on the comparative DDT resistance found in flies in areas where the Residual Spray Program had never been operated. At each premise investigated, it was routine procedure to hold a control group of flies in a Petri dish cage subject to similar environmental conditions as the flies being tested, but avoiding exposing them to DDT.

Panels "G" and "M" shown in Tables II, III, and IV were prepared in Alabama on September 12, 1949, after tests using the Savannah Laboratory "S" panels furnished with the fly testing kit indicated a possibility that these panels, spray date unknown, were losing effectiveness due to age of residue. The "G" panels were treated at the rate of 200 mg. per square foot using a 25 per cent commercial concentrate. The "M" panels were treated at the same rate using a 35 per cent concentrate prepared at the Montgomery warehouse. An attempt was made to use twenty flies in each test, but the numbers used varied within the limits of sixteen and twenty-five. For the purpose of brevity the exact number of flies used in each test has been omitted from the following condensed tables. Percentages given are to the nearest whole number. In all cases the flies used were collected on the premises where the tests were made.

Tables I and II show the results obtained by using the fly testing kit in two widely

TABLE I
FLY TESTING KIT RESULTS IN SPRAYED
COUNTY "A"

Test Number	Exposure (Hours)	% Knock-Down
1 (House Wall)	$\frac{1}{2}$	65
	1	85
2 (House Wall)	$\frac{1}{2}$	80
	1	100
3 (House Wall)	$\frac{1}{2}$	64
	1	86
4 (House Wall)	$\frac{1}{2}$	63
	1	94
5 ("S" Panel)	$\frac{1}{2}$	18
	1	77

Control: No knock-down at end of 2 hours.

Tests were performed on August 18, 1949, 4 to 5 months after last spray was applied to the house.

separated sprayed counties "A" and "B," sprayed each year for the last three years and two years, respectively.

TABLE II
FLY TESTING KIT RESULTS IN SPRAYED
COUNTY "B"

Test No.	Exposure (Hours)	% Knock-Down on House Walls	% Knock-Down on "S" Panels	% Knock-Down on "G" Panels	% Knock-Down on "M" Panels
1	1	57	30	61	56
	2	83	57	78	88
2	1	60	38	35	50
	2	80	62	65	63
3	1	50	22	23	50
	2	75	39	50	63
4	1	63	---	21	50
	2	96	---	50	77

Control: No knock-down at end of 2 hours.
Above tests were performed on September 15, 1949, 4 to 5 months after last spray was applied to the house.

Table III shows panel test results using flies collected from a premise located in unsprayed area "C," three miles from a small sprayed town and seven miles from the nearest State-CDC Residual Spray Area. No cotton was dusted within two miles of

TABLE III
FLY TESTING KIT RESULTS IN UNSPRAYED
AREA "C"

Test Number	Exposure (Hours)	% Knock-Down on "S" Panels	% Knock-Down on "M" Panels
1	1	83	91
	2	88	95
	5	92	---
	8	96	95
2	1	71	90
	2	71	90
	5	90	---
	8	95	100
3	1	91	83
	2	96	88
	5	100	---
	8	---	100
4	1	80	89
	2	80	89
	5	90	---
	8	100	96
5	1	86	82
	2	86	86
	5	95	---
	8	100	95
6	1	55	85
	2	70	85
	5	75	---
	8	90	100

Control: No knock-down at end of 2 hours for each panel group.

the premise during the last two years. The "S" panels were used on September 9, and the "M" panels were used on September 13, 1949.

Table IV shows the panel test results using flies collected from a premise located in unsprayed Area "D," seven miles from the nearest State-CDC Residual Spray Area. No cotton was dusted within three miles of the premise during the last two years. Tests were made on September 13, 1949.

TABLE IV
FLY TESTING KIT RESULTS IN UNSPRAYED
AREA "D"

Test Number	Exposure (Hours)	% Knock-Down on "S" Panels	% Knock-Down on "G" Panels
1	1	75	58
	2	75	63
	7	85	90
2	1	75	58
	2	80	58
	7	95	95
3	1	71	50
	2	76	55
	7	90	77
4	1	---	67
	2	---	67
	7	---	95
5	1	---	55
	2	---	55
	7	---	85
6	1	---	67
	2	---	71
	7	---	92

Control: No knock-down at end of 2 hours.

Table V gives the panel test results using flies collected from a premise located in unsprayed Area "E," seven miles in 1948 and eleven miles in 1949 from the nearest State-

TABLE V
FLY TESTING KIT RESULTS IN UNSPRAYED
AREA "E"

Test Number	Exposure (Hours)	% Knock-Down on "S" Panels	% Knock-Down on "G" Panels	% Knock-Down on "M" Panels
1	1	21	38	57
	2	54	71	76
2	1	23	32	58
	2	59	59	71
3	1	8	33	52
	2	50	63	68
4	1	14	38	59
	2	59	67	78
5	1	12	30	54
	2	60	70	75

Control: No knock-down at end of 2 hours.

CDC Residual Spray Area. No cotton was dusted within three miles of the premise during the last two years. Tests were made on September 14, 1949.

When planning these field investigations it had been expected to find that flies from the sprayed areas would be more resistant to DDT than flies from the unsprayed areas. However, comparison of the data presented indicates that there was no appreciable difference in the knock-down rate for flies collected in the sprayed areas when compared with flies collected in the unsprayed areas. Flies in unsprayed area "E" were approximately equally resistant as flies in sprayed area "B," and actually more resistant than wall-tested flies in sprayed area "A." In unsprayed area "D," 100 per cent knock-down was not obtained in any one of nine panel tests at the end of seven hours exposure, and in unsprayed area "C" 100 per cent knock-down was not obtained in six out of twelve panel tests even at the end of eight hours exposure.

In general, our inspections in the rural areas investigated indicated that very little DDT spray was used by the residents, and that the DDT spray used was almost always of low concentration and in most cases was applied sparingly as a space spray.

As a result of these limited investigations we are led to believe that the presence of flies in a sprayed building does not necessarily indicate that the flies have become resistant to DDT. They may have been resistant to DDT always.

LITERATURE CITED

King, W. V., and Gahan, D. B.: Failure of DDT to Control Houseflies. *J. Econ. Ent.* 42 (3): 405-409, 1949.

The public welfare officer has long known that tuberculosis differs from other diseases affecting his clients because of the problem created in the patient's family even after the patient is out of the home. The worse the living conditions, the greater is the danger of infection and the public welfare officer's clients are frequently those representing the worst living conditions in the community. The health officer and his nurses will watch the contact cases. It is their responsibility to see that regular and thorough examinations are given and that such families are trained in health education. These are the families that should have good housing, more adequate food than families in which there has been no tuberculosis, and no serious overwork or overstrain.—*Ruth Taylor, Nat. Tuberc. A. Bull., Oct. '49.*

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR OCTOBER 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During October 1949			October Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	7720	**	**	29.6	27.0	29.5
Total stillbirths	193	**	**	24.4	25.8	26.9
Deaths, stillbirths excluded	2148	1245	903	8.2	8.4	8.2
Infant deaths:						
under one year	282	144	138	36.5	33.5	35.6
under one month	209	104	105	27.1	23.3	25.6
Cause of Death						
Tuberculosis, 001-019	88	38	50	33.8	34.5	35.7
Syphilis, 020-029	18	7	11	6.9	8.8	7.0
Dysentery, 045-048	1	1		0.4	***	***
Scarlet fever, 050					0.4	
Diphtheria, 055	6	5	1	2.3	3.8	1.9
Whooping cough, 056	1		1	0.4	0.4	2.3
Meningococcal infec- tions, 057	1		1	0.4		
Poliomyelitis, 080, 081	1	1		0.4	0.8	
Encephalitis, 082-083	1	1		0.4		0.4
Malaria, 110-117	3	1	2	1.2		0.4
Malignant neoplasms, 140-200, 202, 203†	261	178	83	100.2	84.1	74.1
Diabetes mellitus, 260	20	8	12	7.7	15.7	14.7
Pellagra, 281	2	1	1	0.8	1.5	1.9
Vascular lesions of central nervous system, 330-334	224	125	99	86.0	97.5	89.3
Other diseases of nervous system, 300-318, 340-398	30	15	15	11.5	5.0	***
Rheumatic fever, 400- 443	6	4	2	2.3	2.3	***
Diseases of the heart, 410-443	580	369	211	222.6	221.8	177.0
Diseases of the arte- ries, 450-456	18	11	7	6.9	10.0	7.8
Other diseases of the circulatory system, 444-447, 460-468	34	16	18	13.1	4.2	***
Influenza, 480-483	8	3	5	3.1	3.4	3.9
Pneumonia, 490-493	69	37	32	26.5	23.8	30.7
Bronchitis, 500-502	4	2	2	1.5	2.3	1.6
Appendicitis, 550-553	10	6	4	3.8	2.7	3.1
Intestinal obstruction and hernia, 560, 561, 570	16	12	4	6.1	2.7	7.3
Gastro-enteritis and colitis (under 2) 571.0, 764	21	14	7	8.1	5.4	2.3
Cirrhosis of liver, 581	14	12	2	5.4	6.9	5.8
Diseases of pregnancy and childbirth, 640- 689	12	4	8	15.2	13.8	26.9
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684	3	1	2	3.8	5.5	9.0
Congenital malforma- tions, 750-759	19	12	7	2.5	3.3	***
Accidental deaths, total, 800-962	134	88	46	51.4	64.9	66.0
Motor vehicle acci- dents, 810-835, 960	54	36	18	20.7	23.8	26.0
All other defined causes	436	239	197	167.3	173.1	227.0
Ill-defined and un- known causes, 780- 793, 795	110	35	75	42.2	50.7	47.3

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the October report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204) and mycosis fungoides (205).

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REPORT NEW SURGERY TO SAVE CHILDREN FROM FATAL DISEASE OF PANCREAS

A new surgical procedure to save the lives of children afflicted with a hitherto uniformly fatal disease of the pancreas has been devised by three New Orleans doctors.

The operation, splanchnicectomy, involves cutting certain nerves just below the diaphragm. It is performed in conjunction with blocking of nerves in the same area by injection of procaine hydrochloride, a pain-killing drug.

The doctors are William B. Ayers, Daniel Stowens and Alton Ochsner of Tulane University School of Medicine and the Ochsner Clinic. They report the procedure in a recent issue of the Journal of the American Medical Association.

The disease, characterized by formation of fibrous material in the pancreas, was first recognized in 1938, according to the doctors. Babies suffering from the disease characteristically develop pneumonia or other respiratory conditions at an early age. Nutritive difficulties in babies also are characteristic.

A 17-month-old girl, identified only as G. G., had pneumonia at five months of age and during the following year had two severe infections of the upper part of the respiratory tract, the doctors say. She grew slowly and had a persistent cough.

After the operation and nerve block were performed, her appetite and general appearance improved and her difficulty in breathing disappeared. She was discharged from the hospital free of symptoms.

Three other children with the disease on whom the doctors performed the surgery and nerve block responded in a similar manner. A fifth child died of heart failure during the surgery.

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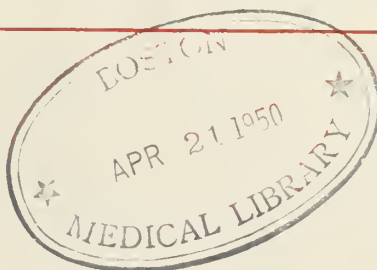
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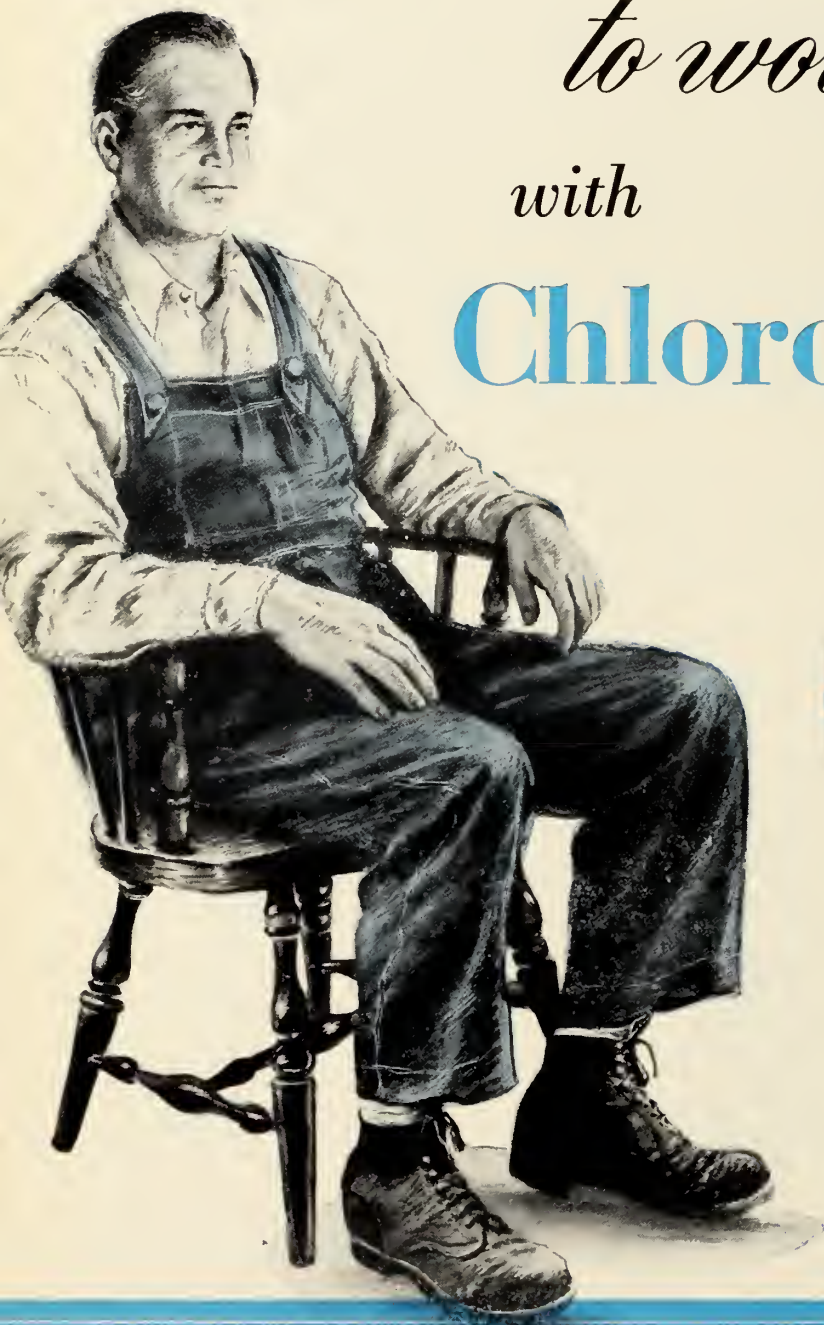
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DIAGNOSIS AND TREATMENT OF AMENORRHEA

HERBERT H. THOMAS, M. D.

JOHN F. HARSH, M. D.

And

W. N. JONES, M. D.

Birmingham, Alabama

In considering a patient who consults the doctor because of amenorrhea, it must be remembered that this is only a symptom of what may be a complex diagnostic problem. The patient and, too often, the doctor may think of amenorrhea as primarily a disease of the genital organs which may be treated empirically by various endocrine preparations with no more than a cursory examination in an attempt to find its cause. Instead, the symptoms of amenorrhea may be a manifestation of any number of diseases located in various parts of the body and be of varying degrees of seriousness to the patient.¹ It is to call attention to this fact that this paper is written.

There are several periods during life in which amenorrhea is a physiologic finding. This occurs during the premenarchial and postmenopausal periods, during pregnancy and for a variable period of time during lactation. These periods of physiologic amenorrhea may vary considerably as to time of onset and duration, and should be kept in mind when one is confronted with

absence of menstruation as a symptom. Especially, pregnancy must be considered as it may even occur before the menarche or take place several years after menstrual flow has been experienced. It is the most common cause of amenorrhea.

Amenorrhea, when not associated with the above physiologic periods of absent menses, is usually the result of some profound change in the body functions. Due to the fact that the ovary is controlled by the pituitary gland, which is influenced by various changes in the body, many diseases and conditions of the body will directly or indirectly influence ovarian function. This may be manifested as abnormalities of uterine bleeding or as amenorrhea. Since there is such a multiplicity of influences which may underlie genital dysfunction leading to amenorrhea, there is hardly any problem that may require more painstaking and thorough study.

Amenorrhea may be divided into two types, initial and intercurrent. Initial amenorrhea is where the patient has never menstruated, and often results from congenital deficiencies or from unfavorable conditions arising during the prepubertal period which may adversely affect the anterior pituitary gland, the ovaries or the other genital structures. If the menarche has not been instituted by the eighteenth year, the diag-

Read before the Alabama Association of Obstetricians and Gynecologists, Birmingham, October 12, 1949.

From the Endocrine Clinic, Department of Gynecology, Medical College of Alabama.

1. Randall, L. M.: Amenorrhea Not Associated with Pregnancy in Young Women, *Am. J. Obst. and Gynec.* 52: 975-983 (Dec.) '46.

nosis appears justified. Intercurrent amenorrhea is where the patient, having previously menstruated, has ceased due to some influence on the pituitary gland, ovaries or uterus. Initial or intercurrent amenorrhea may be caused by the same factors but prognosis is much better in the intercurrent group.

Various authorities have different definitions as to what should constitute amenorrhea. Many consider that a period of one year must elapse before a diagnosis of amenorrhea can be made. A more logical period of time would be that equal to the length of three menstrual cycles because treatment must be instituted early to achieve any degree of success.

SOURCE OF MATERIAL

The incentive for this paper came from the collecting of fifty patients from the Endocrine Clinic of the Department of Gynecology and from private patients manifesting amenorrhea as a symptom. These patients will not be used for statistical purposes or illustrations but the handling of their cases brought forward most of the problems of diagnosis presented in this paper.

METHODS OF DIAGNOSIS

In the following paragraphs are outlined procedures which may be used to arrive at a diagnosis of the cause for the amenorrhea. These steps should be taken in a logical manner and, if routinely done, will often prevent the diagnosis from being missed.

To be emphasized is a detailed history and physical, including a very careful pelvic examination.

Routine laboratory studies should include urinalysis, complete blood picture, serologic test for syphilis and sedimentation rate. These studies aid in diagnosing or in ruling out the constitutional diseases as a cause for amenorrhea.

Of greatest importance in the diagnosis of amenorrhea is the quantitative urinary gonadotropic hormone determination.* This requires a twenty-four hour urine specimen. The normal values in the female range from

0 to 50 mouse units per 24 hours. Any elevation above these values is diagnostic of ovarian failure. Values of 6 mouse units or less per 24 hours are suggestive of pituitary failure.

As a confirmatory aid in the diagnosis of amenorrhea is the quantitative urinary 17 ketosteroid determination from a 24-hour specimen of urine. In the female normal values will range between 6 and 12 milligrams per 24 hours. Low values are suggestive of adrenal, ovarian or pituitary failure while elevated values suggest adrenogenitalism, Cushing's syndrome, or an androgen-producing tumor of the ovary.

Of importance when combined with clinical findings is a basal metabolic rate determination because so many patients with amenorrhea manifest symptoms of hypothyroidism. To be remembered is the fact that the thyroid is a target gland of the pituitary similar to the gonads and thus in many instances will reflect changes caused by circumstances outside the thyroid gland itself. Fasting serum-cholesterol determinations are of confirmatory aid. Values over 250 milligrams per cent are suggestive of hypothyroidism.

There are many accessory studies which aid in diagnosing or confirming the various diseases and dysfunctions leading to amenorrhea. Lateral x-ray of the sella turcica, visual field determinations and fundioscopic examination will aid in the diagnosis of any pituitary or intracranial neoplasm.

An endometrial biopsy or vaginal cytology smear may be of value in estimating the estrogenic hormonal level. A simple and quick method of determining estrogen levels is the vaginal cytology smear stained in methylene blue or eosin and studied microscopically for cellular variations. Cells which have large nuclei and a small amount of cytoplasm denote little estrogen present. An equally simple test to determine presence or absence of estrogen is to give intramuscularly 5-10 milligrams of progesterone daily for five days. Bleeding within 36 to 72 hours following the injections indicates that estrogen is still being produced but not in quantities sufficient to cause normal menstrual bleeding.

X-rays of the hand, foot and elbow may be used to reveal acceleration or retardation of epiphyseal development in the young pa-

*The urinary gonadotropic and 17 ketosteroid hormone determinations were quantitatively made on 24 hour urine specimens in the laboratory of the Department of Pharmacology through the courtesy of Dr. Robert Teague, Professor of Pharmacology.

tient. This is of especial value in ovarian and pituitary failure.

ETIOLOGY OF AMENORRHEA

In trying to cover such a wide field in eliciting the various causes of amenorrhea, it is necessary to place these factors into an orderly grouping arrangement. The uterus, ovaries, pituitary gland and hypothalamus are structures principally affected, which, under certain circumstances, may cause amenorrhea. Therefore, the various factors leading to amenorrhea will be discussed and classified under these anatomic structures.

UTERINE FACTORS

Uterine factors do not pose a difficult problem as they are usually easily diagnosed. Congenital defects, such as an absent uterus or vagina, are encountered rarely but in all instances of initial amenorrhea must be carefully searched for. Where there is a history of pelvic surgery or where irradiation has been used in the past, it could be a factor in stopping the menses due to destruction or removal of the endometrium.

A careful pelvic examination will be of great aid in looking for uterine factors as a cause of amenorrhea.

An endometrial biopsy may be used to reveal the type of endometrium present. In instances of very low estrogen production the endometrium will be very atrophic and little can be obtained by biopsy. Occasionally, a biopsy may reveal tuberculous endometritis.

OVARIAN FACTORS

A syndrome, described by Turner in 1938 and later elaborated upon by other investigators, is characterized by short stature, frequent congenital defects, decreased amounts of pubic and axillary hair, osteoporosis, underdeveloped breasts and genital organs, and amenorrhea.² This syndrome is due to congenital aplasia of the ovarian tissue during the developmental period of gestation. Urinary gonadotropic hormone tests reveal an elevation above normal values, demonstrating failure of ovarian function. These pa-

tients, though small, are strong and well developed in contrast to pituitary dwarfs. The prognosis is good when they are placed on proper therapy, except that sterility is absolute.

In other patients the ovary may develop to a stage where menses may occur with or without ovulation, and, after a variable length of time due to intrinsic ovarian failure, the patient undergoes a premature menopause. The statural and secondary sexual development is normal but the fertility ratio is low, and once the ovary has failed sterility is absolute. The urinary gonadotropin values will be high, ranging up to several hundred mouse units per twenty-four hours. Endometrial biopsies and vaginal cytology smears will be of confirmatory aid in revealing an estrogen deficiency. These patients often have little or no climacteric symptoms at the time of their menopause.

Too often, radical surgical procedures result in complete destruction of both ovaries, with sterility and a premature menopause as the result. When irradiation is given to check abnormal bleeding, especially in young girls, it may be very difficult to determine the correct amount for therapeutic doses, with the result that permanent damage may be done to the ovary. This may result in amenorrhea and undesired sterility. Pelvic infection, advanced endometriosis and ovarian tumors may so destroy the ovaries as to leave them functionless.

Quantitative urinary gonadotropin determinations are of greatest value in showing whether or not the ovaries are functioning. Elevated values above the normal range of 50 mouse units per 24 hours will indicate ovarian failure. Endometrial biopsies, vaginal cytology smears, progesterone withdrawal tests and urinary 17 ketosteroid determinations are of confirmatory value only.

PITUITARY FACTORS

The pituitary controls its target glands, the thyroid, adrenals and gonads, by a complex arrangement of hormonal checks and balances. In the normal healthy person these function very efficiently and smoothly. When a derangement of function occurs in any of these glands the entire group is affected to varying degrees. Also, any serious illness, injury or severe emotional experi-

2. Albright, F.; Smith, P. H., and Fraser, R.: Syndrome Characterized by Primary Ovarian Insufficiency and Decreased Stature. Report of 11 Cases, with Digression on Hormonal Control of Axillary and Pubic Hair, *Am. J. M. Sc.* 204: 625-648 (Nov.) '42.

ence may have its effect on the endocrine system through the effect on the pituitary gland.

The pituitary factors are divided into two categories: those primarily causing amenorrhea through intrinsic organic disease of the pituitary gland, and into those causing amenorrhea by the effect of disease and dysfunction in other parts of the body on the pituitary gland.³

Intrinsic disease of the pituitary gland which may destroy the major portion of the anterior lobe produces panhypopituitarism or Simmond's disease. Rarely, this may be due to tuberculosis, syphilis or metastases from a malignant process. The most common cause which accounts for about fifty per cent of absolute hypopituitarism is postpartum necrosis of the pituitary gland (Sheehan's Syndrome).⁴ This usually dates from circulatory collapse of a patient having severe postpartum hemorrhage. It is characterized by failure of lactation, hypoglycemia, amenorrhea, with other evidences of genital regression, and hypoadrenalism as revealed by loss of axillary and pubic hair. The urinary gonadotropins and 17 ketosteroids are low. The basal metabolic rate is low and the serum cholesterol is elevated.

Grouped in the intrinsic diseases of the pituitary gland are the adenomas and cysts which may cause hypopituitarism by compression. These should always be kept in mind and a careful search made. Such tumors are the eosinophilic and chromophobic adenomas of the pituitary gland and the occasional suprasellar cyst such as the craniopharyngioma. A lateral x-ray of the sella turcica, visual fields and fundoscopic examination will aid in the diagnosis of any increasing intracranial lesion.

The basophilic adenoma rarely reaches any size and will not be revealed by x-ray of the sella turcica. Its effect is on the adrenal glands to produce hyperadrenalism when hyperplasia of both glands is found. This will be discussed in more detail later.

When panhypopituitarism occurs in childhood the pituitary dwarf results (Levi-

Lorain type). The child is unusually fragile and manifests evidence of hypothyroidism, hypoadrenalism and hypogenitalism. These patients never menstruate nor reproduce.

In the second category the pituitary gland is affected secondarily by changes that occur in other endocrine glands and by disease processes or abnormalities in other parts of the body.

Due to the delicate system of checks and balances between the pituitary and other endocrine glands, any alteration in one of these target glands will be reflected to some extent in the function of the entire endocrine system. Intrinsic disease in the thyroid or adrenal glands may have a reflected influence on the function of the ovary through the pituitary gland. Thus, hypo- or hyperthyroidism may cause amenorrhea by influencing the secretion of gonadotropins. It is not unusual to find a patient manifesting amenorrhea with a lowered metabolic rate and an elevated serum cholesterol that will respond to therapeutic doses of thyroid gland substances.

The adrenal gland will similarly influence the pituitary gland by lowered or elevated function caused by intrinsic disease. Addison's disease, causing decreased adrenal activity, and Cushing's syndrome or adrenogenitalism, causing increased adrenal activity, will often manifest amenorrhea as a symptom. Virilizing tumors of the ovary, such as the arrhenoblastoma, or the adrenal cell rest tumor may cause amenorrhea.

There has been increased interest as to the effect of nutrition on the endocrine system. Especially, attention has been centered on the effect of decreased proteins on the pituitary gland function. Several clinical studies made during the War suggest that protein deficiency is a cause of amenorrhea. Other food elements are also of importance.

The mechanism of production of amenorrhea in anorexia nervosa is probably on a nutritional basis, for menstruation is frequently restored when weight gains are produced by food ingestion, especially proteins.

Diseases of a constitutional nature, such as tuberculosis, nephritis and severe acute diseases, may cause amenorrhea through their effect on the pituitary gland by the toxicity produced or by deprivation of proteins through loss of appetite or inability to assimilate food. Metabolic diseases such as

3. Aub, J. C., and Karnovsky, D.: *Medical Progress; Endocrinology; Treatment of Abnormalities of the Anterior Pituitary Gland*, New England J. Med. 226: 759-768 (May 7) '42.

4. Sheehan, H. L.: *Simmond's Disease Due to Postpartum Necrosis of the Anterior Pituitary*, Quart. J. Med. 8: 277-309 (Oct.) '39.

obesity and diabetes often cause amenorrhea. Chronic intoxication from morphinism, alcoholism and lead poisoning may lead to amenorrhea.

Quantitative urinary gonadotropin determinations are low in pituitary failure. These values will usually be below 6 mouse units per 24 hours. Low values are not so diagnostically accurate for pituitary failure as are the elevated values found in ovarian failure. However, the low values are significant when coupled with obvious clinical findings of lowered pituitary function.

Of confirmatory value are the tests for adrenal, thyroid and gonadal activity because of the secondary changes found in these organs due to the influence of the pituitary gland.

HYPOTHALAMIC FACTORS

Although difficult to prove, there is gathering evidence that the pituitary gland is influenced by the central nervous system. This probably is mediated through the hypothalamus and hypothalamico-pituitary nerve pathway. The proper release of gonadotropins, probably the luteinizing hormone, may be prevented by blocking impulses from the hypothalamus to the pituitary gland.⁵ This may result in menstrual irregularities or amenorrhea.

Such factors as emotional tension and psychic shock, prolonged lactation due to continuation of the sucking reflex, and any tumor or disease process which destroys or injures the hypothalamus may cause amenorrhea. Proving this as a cause of amenorrhea is difficult but should be thought of when any of the above factors are found.

TREATMENT

Treatment of amenorrhea should never be attempted until a diagnostic survey has been made. Many causes may be found which will make treatment for restoring menstrual function to normal impossible or inadvisable. However, in many instances, therapy of one kind or another may aid in the restoration of normal menstrual function and possibly fertility.⁶

5. Reifstein, Edward C., Jr.: Psychogenic or "Hypothalamic" Amenorrhea, *M. Clin. North America* 30: 1103-1114 (Sept.) '46.

6. Randall, Lawrence M.: The Treatment of Amenorrhea in Young Women, *Am. J. Obst. and Gynec.* 53: 453-458 (March) '47.

The reasons for treating amenorrhea are to restore fertility and to allay psychic fears that some women have when they do not menstruate. Also, in some instances, the diagnosis and removal of the cause for amenorrhea will restore good health to the individual.

Thyroid in doses of one-half to two grains daily may be of benefit in instances where there is evidence of lowered metabolic function. Starting with one-half grain, this may be gradually increased until one or two grains are being taken daily. Response will usually occur in one to two months if any benefit is to be obtained.

To aid in priming the uterus and in restoring cyclicity, Premarin* (3.75 milligrams) or Estinyl† (0.15 milligrams) may be given daily for twenty days and rest for ten days. Progesterone* (25 milligrams) should be given intramuscularly during the last five days of the estrogen therapy. Withdrawal bleeding usually will follow within a few days. This should be repeated for four to six cycles, allowing about ten days in between each cycle. Then the patient should be given a salvage of 45 days without therapy to see if there is a spontaneous return of the menses. In some instances where the amenorrhea is not of too long duration the menstrual function may be restored to varying degrees.

The general level of health of each individual must be put in as good condition as possible. Adequate nutrition, including proteins and vitamins, must be supplied. Obesity should be treated with adequate diets to reduce the patient gradually.

No use has been made of irradiation of the pituitary gland or the ovaries to restore function. None of the commercial gonadotropic preparations has been used in this study.

SUMMARY

Too often an attempt to restore the menstrual function is made without any attempt at diagnosis of the underlying cause. In a few instances failure to do this may overlook serious disease until it is past any hope of cure. In the vast majority of instances,

*Premarin and Progesterone were furnished by Ayerst, McKenna and Harrison.

†Estinyl and Proluton (Progesterone) were furnished by Schering Corporation.

lack of a diagnostic survey may allow needless treatment or the wrong type of therapy to be given. In those where restoration of

menstrual function is to be attempted, therapy must be chosen which will likely succeed.

THE GENERAL PRACTITIONER AS A CITIZEN IN HIS COMMUNITY

J. P. SANDERS, M. D.

Vice-President

American Academy of General Practice

Shreveport, Louisiana

Like all other people in the community, the general practitioner is a citizen, a tax-payer, and a voter. He has the same rights and privileges as other citizens. In this talk I intend to discuss the general practitioner as a tax-payer, a civic leader, a politician, an educator, an economist, a religious leader, a neighbor and friend, a sociologist, a public health expert, and as a family consultant.

THE GENERAL PRACTITIONER AS A TAX-PAYER AND VOTER

As a citizen of the community, the general practitioner pays a moderate amount of taxes, usually knows where and how the taxes are spent, knows and understands where they are needed, and where they will benefit the community the most. The general practitioner knows what issues are up for discussion in the community, and usually has an intelligent answer.

There was never a greater need for educated, intelligent voters, voters that will take the time to find out what the correct answers should be, and will vote those answers. More and more taxes are being imposed constantly, and I am sorry to say that many people now allowed to vote have no idea whether they are necessary or not. This is the age of the "gimmies," in which too many people are wanting something for nothing. Few voters stop to think that they themselves are paying the bills. There are greater and greater demands for public works, for more public institutions, for bigger and better equipped schools and hospitals, for more public buildings. Roads are being laid out; bridges are being constructed, dams advocated, canals dug, and electric power plants constructed. Many voters do not know whether they are necessary or not.

There should be no place at the present time for ignorant voters. Our country has become too big, too diversified for little thinking. There are too many interests (many selfish) to turn over our government to ignorant, uninformed, unread people, who know little and care less about how their government is run. The family doctor meets every characteristic of a good voter and tax-payer, and it is imperative that he assume his responsibility. His influence on his patients alone is enormous.

THE GENERAL PRACTITIONER AS A CIVIC LEADER

It is generally agreed that a physician must be in the upper 10 per cent to get through medical school. Competition is so great through high school, college and medical school that it is impossible to survive unless he is a good student. Then, by nature, the general practitioner, through his varied experiences in community life and his various contacts, becomes interested in civil affairs. He has an interest in the personal health of his patients, their education, their schools, their recreations, and all other things of public interest.

In every community we find the general practitioner interested in all sorts of service clubs, such as Kiwanis, Rotary, and various other organizations. Many times the doctor is an active member of fraternal organizations, such as the Masons, the Elks, and other secret orders. Many doctors have helped to institute these organizations in their community, and some have been their first presidents. This is another civic duty that is laudable and should be participated in. It was never more imperative than now for him to take an active part in civic affairs. He owes it to his community, to his family, to his patients, and to himself.

THE GENERAL PRACTITIONER AS A POLITICIAN

Few medical men are willing to sacrifice their time, their talents, and their financial standing to enter politics. Politicians have always been of somewhat questionable character. Too many of them have been parties to fraud, collusion, and other questionable acts, so that the average doctor does not feel inclined to enter politics. He is afraid he will have to sacrifice his good name; that he will lose the respect of his patients and his prestige in the community, and take a loss in income. But we must remember that the general practitioner exerts an enormous influence for good wherever he serves. For those who are willing to sacrifice their time and talents, there is an enormous amount of good that can be done. There is certainly a great need at the present time for conscientious general practitioners to enter the political field.

Doctors in most communities are excused from jury service. Whether this should be done or not is very questionable in my mind. Certainly, if any of you had your life or an important decision in the hands of a jury, you would be very pleased to find that jury foreman a family physician.

During the past few years the doctor has been called on the national scene because of the threat of socialized medicine. We were untrained in the science of politics, and many of our representations were crude and poorly planned. Committees representing their own state organizations went to Washington and testified before Congress. They met smart politicians there who knew all the questions and all the answers. Some of them made good showings, but many, I fear, made very poor showings, particularly against the opposition. But, as the fight has continued, we have learned more and more that we had to get into the political field for self-preservation. We studied the issues at hand; we read the bills, got resumes of them from authoritative sources, and read comments pro and con, so that in recent times those that have been called upon have given much better account of themselves than earlier representatives. Obviously, if we are to answer the socialized medicine threat, we are going to have to know what it has accomplished in other countries, what the good parts are, as well as the bad, and from all of this information anticipate what

we may expect in America. Then, we must bring this information to the attention of our congressmen.

Many of us have found it advisable, in the past few years, to know our congressmen personally. Many of us correspond with them at fairly regular intervals, discuss not only the medical scene but other questions that may influence medical legislation. Obviously the "Aid to Education" bill is just as objectionable in many of its ramifications as the old Murray-Wagner-Dingell bill itself. Call it what you will, the general practitioner must, of necessity, be a good politician if he is to survive and his profession be allowed to progress unmolested.

THE GENERAL PRACTITIONER AS AN EDUCATOR

Certainly, through his own education and training, the family physician is interested in greater skill. Being a high school, college and medical school graduate, with from one to three years postgraduate training, puts him in the upper bracket. He is naturally interested in higher education. Doctors (usually prolific) are interested in the schools where their children attend. They are frequently found on school boards, and even on college boards of directors. Frequently the doctor's wife is an educated woman and active in educational work in her community. The doctor, of necessity, is interested in postgraduate training. Most doctors take extra courses after graduation, work on hospital assignments, and attend medical conventions, illustrating their interest in this all-important endeavor.

The reading of general practitioners runs the gamut from ultra-scientific works to comic books. They keep up with the current events on local, national and worldwide bases. Their historical interests must compare favorably with those of the patients with whom they come in contact. Most doctors read some kind of fiction, and can usually discuss the best books of the day.

No amusement field is free of the general practitioner advocate. Most doctors like the theater; some are interested in music. Practically all are interested in sports. Sports run the gamut from fishing to horse racing. They include golf, baseball, football, basketball, gun clubs, boating, and many others.

Doctors, as a whole, do a great deal of writing. Many of them write along scien-

tific lines, but some even write fiction in the form of short stories, books, and even verse. I know a few general practitioners who have a musical trend and compose—even symphonies. Others write plays. Some do painting. All in all, the general practitioner has to be considered as an educator of the “first water.”

THE GENERAL PRACTITIONER AS AN ECONOMIST

There has been quite a transformation in the past half century, from the time when the doctor usually died a pauper to the present doctor, who is a fairly decent business man. This has not come about because of any peculiar change in heart of the doctor, that he is less philanthropic than his grandfather, but of necessity. First of all, the doctor's education is expensive. In order to acquire a medical degree, he has to spend all of his own money, all of his family's, and frequently all the bank will let him have in order to get through medical school. The average doctor who comes out of his internship realizes he has had a rather large investment in his education, not only from the sources mentioned above but of the tax-payers' money which built and maintained the medical school from which he graduated.

While the general practitioner admittedly has the lowest income of all the physicians, it is usually adequate for most of his needs. Since his overhead expenses are approximately 50 per cent of his income, and the average income is approximately \$10,000.00 per year (\$9,700.00 average of the general practitioner in 1947 according to Medical Economics), this would make his expenses around the same figure—\$10,000.00. But some 15 to 35 per cent, probably an average of 25 per cent (\$5,000.00), is lost on poor accounts. This accounts for approximately \$25,000.00 per year that the doctor does, and realizes \$10,000.00 net. However, this probably puts him in the upper third class of buyers in his community. He, of necessity, must live in a nice home, in a good neighborhood. He must drive a nice car, which usually should not be too expensive. He must wear nice clothes, but they must not be extravagant. Few doctors rank in the best dressed ten in the community. He goes to the nice places of amusement, but usually does not appear in extravagant places. He takes nice vacations, stays in good hotels,

but not usually in those that are exorbitant, and he usually does not prolong his vacation. He carries a moderate amount of insurance, is well fed, and, in general, is in the upper third of the class in the community. All in all, the general practitioner is an all-round good customer. His bank account, though usually small, is adequate for his needs. He meets his own obligations, and very few are ever found on relief or public subsidy. Most general practitioners are never rich and never considered the wealthy of their community.

THE GENERAL PRACTITIONER AS A RELIGIOUS LEADER

The family doctor, next to the minister, probably has the greatest opportunity as a religious leader in his community. Actually, we find many of them holding responsible positions in their respective churches. Some of them are deacons, elders, stewards, and other officers, wherever they live. They influence religious thinking far more than is ordinarily recognized. Obviously, with the scientific background they have, religious training means much in their careers.

Many doctors find it interesting to study and compare various religions. Protestant physicians are often interested in the Catholic religion, or the Jewish religion, or even in Mohammedanism, Buddhism, or Taoism. The general practitioner exerts an enormous influence in the trends of religion in his community. Many of his patients are influenced by what church he belongs to. Often he directs “some wayward soul” back to right living.

The family doctor's influence for honesty, morality and spirituality is frequently an important factor in determining the religious lives of his patients. Patients in deep trouble always seek their doctor and their God. When there is a death or some other catastrophe in the family, the family physician is always on the scene. He is an important one in consoling the suffering family. He carries them through severe illnesses, and frequently his own attitude of sympathy and kindness is little short of God-like.

During the past several years we have heard a great deal about socialized medicine. The medical profession has been lambasted so much that few have taken the trouble to defend us because of our medical ethics.

Yet, we find all over the country that other concerns, other organizations, other businesses that want to improve their own standing and morality are copying the ethics of the medical profession. No organization considers itself above reproach unless its own ethics approach those of the physicians. They may not have the Hippocratic oath but they attempt to include its fine teachings. In most cases, people do not look upon their family physician as a religious leader, and yet, by precept and example, he probably ranks only second to the minister himself. It is certainly important that a good doctor be a good Christian.

THE GENERAL PRACTITIONER AS A NEIGHBOR AND FRIEND

Doctors have their own friends and are neighbors similar to any other citizen. They are called upon like any other neighbors to assist in emergencies. While doctors are inclined to make friends among other doctors, their friends are not limited to the medical profession, nor are their friends limited to their own patients. A great many doctors prefer to make their friends among non-patients. They find that such a relationship is more satisfactory. The friendships of the doctor and his family run the gamut of all human relations. He may have a friend that imbibes too freely, and others that are teetotalers. Many times it is the duty of the doctor to stand by the bedside and see his best friend die. Doctors in general are generous of their time, their money, their sympathy, and their talents to their neighbors and friends. There seems to be no limit to which a general practitioner will go for a good neighbor or a good friend.

THE GENERAL PRACTITIONER AS A SOCIOLOGIST

The general practitioner probably stands next to the ministry and religion in the practice of sociology. From time immemorial, the medical profession practiced "the brotherhood of man" and recognized the ability of the patient to pay or not to pay. Likewise, physicians have always given equal care to "all the sick." The right of man to live and be happy has been a "must" in our thinking. We realize that the crippled child had a right to a full life and happiness just as much as the perfect one. Similarly with the tuberculous patient, the epileptic, the polio, the blind, the insane, and the leper. The patient may have cancer or some other

incurable disease but he has the right to the best medical care possible that he can get as long as he lives. This is practical sociology.

The right of the individual to his own privacy has always been recognized by the general practitioner. That is why we have maintained the patient-doctor relationship. Even our laws have had the "privileged communications" written into the statute books for the protection of our patients. We recognize the patient's rights to his own thoughts and ideas. We even believe in the right of man to work for what he gets, even though many of the socializers at the present time seem to have forgotten this and would destroy this privilege. We believe that this privilege is paramount to man's own self-respect and good living. We think it is just as important as any of the other of our God-given rights. Without this right, man "sells his soul for a mess of pottage."

Again I emphasize the fact that doctors are the greatest sociologists of all times, that there is no real social improvement of recent years that the medical profession has not been practicing during all its existence.

THE GENERAL PRACTITIONER AS A PUBLIC HEALTH EXPERT

Through his broad experience, training and practice, the general practitioner becomes an expert in preventive medicine. He works more closely with the public health department and the public health officer than any other man in medicine. Of necessity, he must keep up with all the family needs insofar as preventive medicine is concerned. He comes in much closer contact with the family than the public health officer or any of the specialists. He is the man usually that has to report contagious diseases and help avoid epidemics. The general practitioner knows the requirements for good food, pure water and milk. He knows about drainage and about other public health measures that are necessary to keep his patients in good health. In general, he is a public health expert, second only to the health officer himself, with the added advantage of knowing his own patients' individual needs, their dangers, and their requirements. There is no other man in medicine that you can turn to for your public health needs compared to that of your own family doctor. As transportation increases, more and more patients are traveling out of

the country. It is necessary more and more for the family doctor to advise his patients what precautions to take, what diseases to be vaccinated against, and, in general, what diseases to avoid.

THE GENERAL PRACTITIONER AS A FAMILY CONSULTANT

Here, the general practitioner probably reaches his greatest role. He is the family friend, the physician, the adviser, the consultant, and, in many cases, the family minister. It seems that we have gone astray in the last few years in our trend toward specializing. Patients have been more inclined to seek out a specialist for his own individual ailment. Frequently his selection was ill-advised, and one, two, three or more specialists were required before his case could be diagnosed and properly treated. This seems to be nobody's fault in particular. It is a philosophy that seemed to grow up with the increased specialization. Medical schools were partly to blame because they trained more and more specialists. The medical profession was partly to blame because more and more of them turned to specialization because it was more lucrative, less strenuous, and, in general, meant more prestige. Finally, the patients themselves were partly to blame. They wanted to go to a man who had a name in medicine. This was usually a specialist. Medical care under those circumstances became more expensive.

It seems that a more sensible solution would be a sort of "cradle to the grave" philosophy—not of the Bevan type, but of the family doctor or general practitioner type. In this type, the general practitioner is allowed to bring the baby into the world, look after it during its infancy, childhood, youth and adulthood, and, finally, carry him even on into old age. The human body is an intricate mechanism. It needs complete and continuous study. Besides the physical body, there is the brain and nervous system that control the mechanical device. We are seeing more and more psychosomatic medicine all the time. To the patient, this means simply "coordination of mind and body." Certainly, with the "cradle to the grave" philosophy, it is far more likely that the family physician would understand all the "whys and wherefores" of a patient's reaction than one of many specialists that happens to see the patient in some one illness.

Naturally, we want general practitioners to be better trained. The "horse and buggy" doctor, a wonderful man in his day, is gone. But the well-trained general practitioner with all the present-day facilities will be able to take care of 85 to 90 per cent of any family's problems. He will be able to advise that family what preventive measures to take in order to avoid disease. He will know what exercise and recreation to indulge in, when exercise is too strenuous, or when certain other exercises should be taken up. Knowing the family's circumstances, financial and otherwise, he will know what schools the children should attend, and what education is advisable. It is generally known that not all children should go to college. Many should enter the trades. Others may want to go into business for themselves. Certainly, child guidance should start with your own family physician early in your child's life.

Planning for your child's future frequently can be made much easier if your family physician is called in consultation. No man in medicine understands emotional upsets in families quite so well as the family physician. Frequently he can advise in financial and economic matters that may involve the whole family, including the children. He will know whether marriages are ill-advised or not. He can direct their vacations and help them plan on their retirement. He can even help the patient plan his own demise.

In my opinion, the general practitioner should be a "must" in every family. As I indicated above, he should be the best trained man in medicine. If specialists are necessary, he will know when to advise consultation and whom to consult. This will keep the cost of medical care to a minimum, insure that the patient gets good medical care, and there will be no need of socialized medicine. If patients will stop consulting several specialists, they will save time and money. The family physician should be the regular consultant for all health needs of every family.

CONCLUSION

In conclusion, I wish to state that the general practitioner, like all other citizens, is a tax-payer and voter. He should take an active part in all civic matters, be particularly interested in politics, and some should even enter that realm of endeavor. As an educa-

tor, economist and religious leader, he has a wonderful opportunity to do a lot of good. In the field of public health, he is an expert.

As a neighbor and friend, as a sociologist, and as a family consultant he probably has no superior.

FRACTURES OF THE MIDDLE THIRD OF THE FACE

RUSSELL R. STUTTS, D. D. S.

Birmingham, Alabama

INTRODUCTION

Injuries to the face and jaws resulting from automobile accidents have become an increasingly important problem for the medical and dental professions during recent years. Despite widespread safety measures, "drive safely" campaigns, and so on, the number of accidents is apparently growing, partly attributable, of course, to the increase in automobiles and drivers. In addition to many fatalities, there occur many non-fatal accidents which result sometimes in permanent disability and more often serious maiming or deformity. Injuries to the face are obviously only a small proportion of these casualties but they assume added importance for two reasons. First, many vital organs are situated in this area and, second, facial deformities are conspicuous, sometimes subjecting the victim to mental as well as physical distress.

This case is being presented as representative of those extensive fractures of the middle third of the face which, if untreated, eventuate in the classical "dish-face deformity."

REPORT OF CASE

Chief Complaint

Injury to the face following an automobile accident.

Present Illness

This twenty-six year old, white woman was admitted to the Jefferson-Hillman Hospital, Birmingham, Alabama with a history of having been in an automobile accident three hours prior to admission. First aid was administered at a hospital in a neighboring town and she was immediately brought to Birmingham. The only other significant detail was that the patient was pre-

sumably unconscious for a few minutes immediately following the accident.

Past History

The personal past history, obtained from the patient's mother, was not relevant to the present illness.

Family History

The family history was non-contributory.

Examination Findings

On admission, the face was generally edematous with marked bilateral ecchymosis. The nose had been packed when first aid was administered. There was minimal oozing of blood from the nasal vestibule. The patient was conscious but unable to open her mouth. There was evidence of old dried blood in the pharynx. (See Exhibit A.)



Exhibit A.—Photograph taken immediately upon patient's arrival in hospital.

General Physical Findings

Complete examination was negative except for numerous small abrasions about the upper extremities.

From the Department of Surgery, Division of Maxillo-Facial and Plastic Surgery, Medical College of Alabama.

Roentgenographic Findings

Radiographic studies of the skull revealed marked comminuted fractures of the floors of both orbits, both nasal bones, the cribriform plate of the ethmoid, the base of both frontal sinuses and both malar bones. The medial walls of both antra were also fractured but no evidence of depression was noted. The alveolar process of the maxilla was completely detached. (See Exhibit B.)



Exhibit B.—Postoperative x-ray revealing a fracture of all the bones of the middle third of the face.

Laboratory Studies

All laboratory findings upon admission were within normal limits except for a white count of 16,950 per cubic millimeter and four plus sugar in the urine. (The patient had just received parenteral glucose in saline.)

Treatment

The patient was taken to the operating room on her third hospital day. The malar bones were gently moved into position by use of towel clips without resorting to the Caldwell-Luc procedure. The fracture of the alveolar process of the maxilla was stabilized with multiple loop wire attached to the maxillary and mandibular teeth, and rubber band traction was applied. The nasal fracture was molded into position and a splint of dental modeling compound, with airways passing through it, was applied. For the

first three postoperative days, the patient had an elevated temperature. This reached 103.4° F. on the second day. Convalescence was otherwise uneventful. Penicillin was administered throughout the hospital stay. The patient was discharged on the sixth



Exhibit C.—Final photograph taken three months postoperative, showing good cosmetic results.



Exhibit D.—Final x-ray taken three months postoperative, showing all bones united.

postoperative day and treated as an outpatient at my office for five consecutive weeks. On the fifth week the traction was removed and the patient was dismissed. The patient was seen three months later at which time she was completely asymptomatic. (See Exhibits C and D.)

Diagnosis

Comminuted bilateral fractures of both orbits, both nasal bones, the cribriform plate of the ethmoid, the base of both frontal sinuses and both malar bones, and indication for treatment with closed reduction of the malar fractures and wire-loop fixation of the maxillary separation.

SUMMARY

An illustrated case of extensive facial trauma and its early treatment has been described. The important features in the management of these problems have been discussed.

1318 Comer Building

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

CASE PRESENTED BY
BENJAMIN P. CLARK, M. D.

This two year old male child was first seen at the Children's Clinic two days after having the hand, forearm and distal portion of the upper arm contused and abraded in an electric wringer. There was marked soft tissue swelling and the fingers were cold. The radial pulse was barely palpable. The child had been seen by a physician soon after the injury and treated by application of an ointment and a loose dressing. In spite of pressure dressings applied when first seen, the child sustained rather marked tissue loss, necessitating some tissue grafts to the denuded skin areas.

This case represents a minor one in a group that may be severe enough to result in the loss of an upper extremity. The reasons for drawing it to your attention are:

- 1) The relative frequency of this injury.
- 2) The severity and extent of trauma which this injury inflicts without the degree of damage being immediately apparent.
- 3) The scarcity of reports of this injury in the literature.
- 4) The absence of definite therapeutic suggestions in general texts.
- 5) The general failure to realize the severity of the injury and the benefits of

early, proper treatment to prevent tissue loss.

The mechanism of production of this injury is simple. First the fingers, then the forearm and, if the arm is extended, later the upper arm are drawn into the wringer. The child is usually too small to withdraw the extremity forcibly. If the arm is flexed the wringer produces a churning trauma at the elbow. Two types of trauma result: firstly, a crushing injury from pressure of the rollers, and, secondly, a "brush" or friction type of abrasion or burn from the churning and slipping of the surface of the rollers on the skin. By far the most serious element of the injury is the damage to the underlying soft tissues—the muscles, tendons, nerves and blood vessels. This injury is not evident at first. However, within 24 hours, the underlying damaged but still viable soft tissue, by virtue of hemorrhage under the fascial planes, extravasation of blood and tissue fluid, vascular spasm, and edema, undergoes a process of ischemic aseptic necrosis. Infection may easily supervene, resulting in extensive loss of muscle, tendon, nerve, and even bone tissue. It is this progressive soft tissue damage which is most extensive and serious and is preventable, if proper therapy is instituted *immediately*.

Treatment: Immediate application of pressure dressings is the treatment of choice. The arm is thoroughly cleansed with soap and water under sterile conditions. Large hematomas are evacuated by aspiration. The injured area is covered with sterile, fine-mesh gauze, either plain or saturated with sterile petrolatum. Over this comes a layer of fluff gauze, then a layer of sterile mechanic's waste. This dressing is secured with elastic bandage from the tips of the fingers to the axilla. This elastic bandage gives support to the damaged vessels and prevents edema and extravasation. Under no circumstances is heat applied. Ice packs, on the other hand, may be quite helpful.

In summary it may be said that in wringer injuries, which are frequent, progressive damage to tissue occurs, caused by uncontrolled edema, extravasation of fluid, and infection. The viability of damaged tissue may be preserved by:

- 1) removing contamination,
- 2) preventing infection,
- 3) applying pressure to support the damaged vessels and to prevent swelling, and
- 4) applying cold to the extremity.

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March 1950

BRITAIN'S EXPERIENCE

Britain's experience with socialized medicine under its National Health Service has proved to be "a dismal story of medical decline and danger," according to Dr. George F. Lull, of Chicago, secretary and general manager of the American Medical Association.

Speaking before the 1950 meeting in Chicago of the National Conference on Medical Service, Dr. Lull cited reports condemning effects of the British health scheme on maternity cases and care of children. (The National Conference on Medical Service is an independent organization composed of officers of State and County Medical Societies and other groups interested in medical economics and medical service.)

Dr. Lull pointed out that a highly respected British medical journal, "The Practitioner," published the following conclusions in an impartial review of the first year of the National Health Service by outstanding professional men connected with the service:

"Until some of the major defects in the Act are remedied, grave and unnecessary dangers will exist for both the mother and infant . . . certain very definite risks to childbirth have been added by the present medical service . . .

" . . . the Service has indirectly caused irreparable damage to the teeth of hundreds of thousands of school children."

A member of a British hospital board, Dr. Lull said, told an investigator for the Philadelphia Evening Bulletin that "a child with bad tonsils doesn't have a chance of an operation here, unless her ears are running and there is danger of mastoid trouble."

Dr. Lull also called attention to the first-hand study of the British system by President Harold E. Stassen of the University of Pennsylvania who reported in the Reader's Digest that: "It is a . . . fact that during the first year of the operation of the British National Health Service, from July 1948 to July 1949, the death rate in Britain went up rather sharply."

Stassen also brought back the following report, as quoted by Dr. Lull from the educator's articles in the Reader's Digest:

"The abrupt deterioration in the treatment of the sick is serious enough, but the effect of the National Health Program on preventive medicine is tragic. Public health work, measures for the prevention of disease, either in existence or planned, have been retarded and even abandoned."

Dr. Lull observed that socialized medicine in England during 1949 "displayed all the faults and weaknesses to be expected when applied to a large Nation."

"Today," he emphasized, "after more than a year and a half of the National Health Service, the British predicament stands as a glaring, timely example for all Americans to study and ponder."

Dr. Lull called on the American medical profession to carry on its "grass roots crusade" against compulsory health insurance in this country and to continue alerting the public to the dangers of the program sponsored by Government "socializers."

X-RAYS FOR PAINFUL BOILS AND CARBUNCLES

According to a Boston physician, the best way to treat painful boils and carbuncles is by x-ray.

Writing in a recent issue of Radiology, which is published by the Radiological Society of North America, Dr. Frederick W. O'Brien said that x-ray treatments today go a long way in producing insensibility to pain in many diseases.

"The analgesic effect is often overlooked," he said in his article entitled "Roentgen Therapy and the Relief of Pain."

"The importance today of x-rays as an analgesic has become so convincing, through the successful relief of pain in such afflictions as boils, carbuncles, bursitis and certain types of bone disease, that the radiation therapist is impelled to make the treatment of them current practice," he said, adding:

"Spaced treatments judiciously applied will, in the majority of patients, bring prompt relief from pain."

He discussed the cases of 130 hospitalized patients with severe carbuncles who were treated by x-rays along or in conjunction with surgery. The 60 who received x-ray treatments only were relieved of pain in

three to nine hours after the first treatment. The average number of x-ray treatments was three.

"The average hospital stay," Doctor O'Brien said, "was eight and one-half days as against 13 to 21 days for those who underwent surgery. X-ray treatment is just as efficient today despite the prevalent vogue for the chemotherapeutic agents or so-called miracle drugs."

"The obvious explanation of the relief of pain following irradiation in boils and carbuncles," he explained, "lies in the relief of the tension in the tissues caused by the stretching of the skin secondary to inflammation associated with inflammatory exudate. Pain quickly disappears as the inflammatory process is resolved, with or without drainage of pus."

PROGRAM OF THE ANNUAL SESSION

BIRMINGHAM

APRIL 20, 21, 22, 1950

THOMAS JEFFERSON HOTEL

GENERAL INFORMATION

All sessions of the Association will be in the Terrace Ballroom of the Thomas Jefferson Hotel, convention headquarters.

The maximum time consumed by essayists must not exceed fifteen minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association. Discussions will be limited to 4 minutes for each speaker.

All papers read before the Association must be deposited with the Secretary when read; otherwise, they will not be published.

During the discussion of papers, the speaker will please walk forward to the platform and announce his name and address distinctly.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

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PROGRAM**First Day, Thursday, April 20th**

Terrace Ballroom

Thomas Jefferson Hotel

Morning Session

9:00 A. M.

Call to order by the President—
Frank C. Wilson, Birmingham.

Invocation—
Rt. Rev. C. C. J. Carpenter,
Bishop of Alabama.

Address of Welcome—
Hon. Cooper Green, Mayor of Birmingham.

Address of Welcome—
Karl F. Kesmodel, President,
Jefferson County Medical Society.

PART I**REPORTS OF STANDING COMMITTEES**

1. Prevention of Blindness and Deafness—
Alston Callahan, Chairman.
 2. Mental Hygiene—
Jack Jarvis, Chairman.
 3. Maternal and Child Health—
T. M. Boulware, Chairman.
 4. Physician-Druggist Relationships—
W. M. Salter, Chairman.
 5. Anesthesiology—
Bryce Robinson, Chairman.
 6. Postgraduate Study—
Ralph McBurney, Chairman.
 7. Cancer Control—
J. P. Chapman, Chairman.
(b) American Society, Alabama Division—
Mrs. Lillian G. Meade, State Com-
mander.
 8. Tuberculosis—
Paul W. Auston, Chairman.
 9. Medical Service and Public Relations—
J. Paul Jones, Chairman.
(b) A Message—
Mrs. Arthur A. Herold, President-Elect,
Woman's Auxiliary, American Medical
Association, Shreveport, La.
- Report of the Secretary-Treasurer—
Douglas L. Cannon, Montgomery.
- Report of the Committee of Publication—
Douglas L. Cannon, Montgomery.
- Reports of Vice-Presidents—
- (1) Northeastern Division
J. O. Finney, Gadsden.
 - (2) Southeastern Division
E. L. Gibson, Enterprise.
 - (3) Northwestern Division
J. G. Daves, Cullman.
 - (4) Southwestern Division
W. R. Carter, Repton.

Message of the President—
Frank C. Wilson, Birmingham.

PART II

SCIENTIFIC PROGRAM

1. *Anemias Due to Gastrointestinal Tract Disorders—*

WILLIAM H. RISER, JR.,
Acting Professor and Chairman,
Department of Medicine,
Medical College of Alabama.

2. *Treatment of Complicated Fractures—*

JOHN D. SHERRILL,
Professor and Chairman,
Department of Orthopedic Surgery,
Medical College of Alabama.

* * *

Afternoon Session

Thursday, April 20th

2:00 P. M.

1. *Prolonged Labor—*

RALPH A. REIS,
Associate Professor of Obstetrics and Gynecology,
Northwestern University Medical School, Chicago, Ill.

2. *Hysterectomy, Indications and Technique—*

JOHN C. BURCH,
Professor of Gynecology,
Vanderbilt University Medical School, Nashville, Tenn.

3. *Symposium on Congenital Heart Disease:*

Pediatrics—

WALLACE CLYDE,
Associate Professor of Pediatrics,
Medical College of Alabama.

Cardiology—

JOHN B. BURRETT,
Assistant Professor of Medicine,
Medical College of Alabama.

Surgery—

CHAS. DONALD,
Assistant Professor of Surgery,
Medical College of Alabama.

Anaesthesiology—

E. BRYCE ROBINSON,
Associate Professor of Anaesthesiology,
Medical College of Alabama.

* * *

Evening Session

Thursday, April 20th

8:00 P. M.

1. *Diverticulum of the Female Urethra—*

EMMETT B. FRAZER AND HARVEY H. MINTZ,
Mobile, Ala.

2. *Treatment of Common Skin Disorders—*

RAY O. NOOJIN,
Professor of Dermatology,
Medical College of Alabama.

3. *Treatment of Cancer of the Lip and Nose—*

SAMUEL E. UPCHURCH,
Associate Professor of Surgery (Plastic and Maxillofacial Surgery),
Medical College of Alabama.

4. *Diagnosis and Treatment of Abnormal Uterine Bleeding—*

HERBERT H. THOMAS,
Instructor in Gynecology,
Medical College of Alabama.

* * *

Second Day, Friday, April 21st

Morning Session

9:00 A. M.

1. *Observations on Indications and Results in Splenectomy—*

ARTHUR I. CHENOWETH,
Assistant Professor of Surgery,
Medical College of Alabama.

2. *The Problems of Gastric Carcinoma—*

GILSON COLBY ENGEL,
Professor of Clinical Surgery,
Graduate School of Medicine,
University of Pennsylvania, Philadelphia.

3. *The Jerome Cochran Lecture
Historical Delays in the Application of
Knowledge About the Heart—*

PAUL D. WHITE,
Exec. Director, National Heart Institute,
Boston, Mass.

4. Recognition of the Fifty-Year Club.

5. Announcement of Vacancies in the College of Counsellors.

* * *

Afternoon Session

Friday, April 21st

2:00 P. M.

1. *Address—*

HON. LISTER HILL,
Senior United States Senator from Alabama,
Montgomery, Alabama.

2. *The Responsibility of the Radiologist to the Patient and Referring Clinician in the Examination of the Gastrointestinal Tract—*

PAUL S. SWENSON,
Associate Professor of Radiology,
Jefferson Medical College,
Philadelphia, Pa.

3. *Description and Discussion of the Dacryocystorhinostomy Operation—*

FRANK H. CONSTANTINE,
Manhattan Eye and Ear Hospital,
New York City, N. Y.

4. *Silicosis—*

EDGAR G. GIVHAN, JR.,
Associate Professor of Medicine,
Medical College of Alabama.

Evening Session**Friday, April 21st**

8:00 P. M.

1. *Management of Anaesthetic Emergencies*—
JOHN ADRIANI,
Director of Department of Anaesthesiology,
Charity Hospital,
New Orleans, La.
2. *Comparison of the Newer Mercurial Diuretics*—
WM. J. ATKINSON, JR.,
Mobile, Alabama.
3. *Diseases of the Thyroid in Children—With a Case Presentation and a Motion Picture of the Operation*—
J. HENRY GOODE,
Tuscaloosa, Alabama.

* * *

Last Day, Saturday, April 22nd

9:00 A. M.

Business meeting of the Association sitting as the Board of Health of the State of Alabama.

- (1) Report of the Board of Censors;
- (2) Revision of the Rolls;
- (3) Election and Installation of Officers.

Adjournment

THE FIFTY YEAR CLUB**CLASS OF 1950**

Acker, Chas. T.
Blake, Theodore M.
Boswell, Franklin A.
Campbell, Virgil O.
Douglass, John
Fox, Carl Alexander
Gay, Nathaniel S.
Glasgow, Robt. S.
Gresham, Walter A.
Harwood, Robert E.
Howell, Wm. Edward
Johnston, John David
Klie, Henry B.
Leach, James Edward
Lightfoot, Philip Malcolm
Meharg, Shelton T.
McLeod, John Calvin

Miles, William C.
Moorman, Marion Ridley
Mount, Bernard
Peck, Willena
Prescott, Wm. Ernest, Sr.
Rudolph, Chas. Murray
Sellers, Henry Graham
Shaw, Rowell Wilbur
Speir, Philip Van Buren
Stutts, Henry Lee
Ward, Walter Rowland
Wilkinson, John Edward, Jr.
Williams, Wm. Claiborne
Williamson, George W.
Wilson, Dilimus Wesley
Winn, Lochlin Minor
Wright, Lee Roy

**VACANCIES IN THE COLLEGE OF
COUNSELLORS**

Vacancies that will present in the College of Counsellors at this meeting of the Association are as follows and for the reasons set forth:

1st Congressional District—2. The first terms of seven years of J. Mac Bell and J. Paul Jones have expired.

2nd Congressional District—2. The first terms of seven years of J. O. Lisenby and F. W. Riggs have expired.

3rd Congressional District—1. Emmett T. Brunson's second term of seven years has expired.

5th Congressional District—1. B. C. Scarbrough is deceased.

6th Congressional District—3. R. C. Partlow's first term of seven years has expired. The sec-

ond terms of seven years of R. C. Hill and J. V. Howell have expired.

9th Congressional District—4. The first terms of seven years of G. A. Denison, Hughes Kennedy, J. A. Meadows and J. R. Morgan have expired.

SOCIAL EVENTS**Thursday, April 20**

5 to 7 P. M.

Barbecue by Dr. C. N. Carraway for members of the Association, wives of visiting physicians, and members of the Woman's Auxiliary at Norwood Clinic, 1529 N. 25th Street. Directions or transportation will be furnished by the Transportation Committee.

Thursday, April 20

7:00 P. M.

The Theta Kappa Psi Medical Fraternity invites all Theta Kappa Psi's to a banquet to be held at the Tutwiler Hotel at 7:00 P. M.

Friday, April 21

5:00 P. M.

Dr. James S. McLester and Dr. James B. McLester invite the members of the Association and visiting physicians to their office, 930 South 20th Street, at 5:00 P. M. to meet Dr. Paul D. White.

Friday, April 21

10:00 P. M.

The President's Reception and Dance will be held in the Terrace Ballroom of the Thomas Jefferson Hotel at 10:00 P. M., Friday, April 21.

ANNUAL BANQUET MEETING**ALUMNI ASSOCIATION****MEDICAL DEPARTMENT****UNIVERSITY OF ALABAMA**

The annual banquet meeting of the Alumni Association of the Medical Department of the University of Alabama will be held at 6:00 P. M., April 21, at the Tutwiler Hotel.

Contact Dr. H. Earle Conwell, 811 South 20th Street, Birmingham, at once for banquet tickets.

SCIENTIFIC EXHIBITS

1. Baker, Dr. Roger D.: "Renal Arteriosclerosis and Hypertension." Department of Pathology, Medical College of Alabama, Birmingham.

2. Barfield-Carter, Dr. Melson; Dr. J. W. Underwood and Dr. Perry Morgan: "Gastrointestinal Lesions." Department of Radiology, Medical College of Alabama, Birmingham.

3. Beck, Dr. James P.: "Blood Bank Donor and Recipient Records." Department of Pathology, Druid City Hospital, Tuscaloosa.

4. Brown, Dr. Clyde W.: "Deaths in Surgical Patients Within 48 Hours after Operation." De-

partment of Pathology, Birmingham Baptist Hospitals, Birmingham.

5. Bush, Dr. J. D.; Mr. I. R. Tabershaw and Mr. B. D. Tebbens: "Dusts from Mines in the Birmingham Area, A Study of Their Effects in Guinea Pigs." Department of Pathology, Holy Name of Jesus and Baptist Memorial Hospitals, Gadsden, and Medical College of Alabama, Birmingham; Department of Industrial Hygiene, Alabama State Department of Health.

6. Callahan, Dr. Alston: "Medical Illustrations in the Department of Ophthalmology, Medical College of Alabama." Department of Ophthalmology, Medical College of Alabama, Birmingham.

7. Carlson, Dr. W. W., and Dr. Virginia White-side-Carlson: "Biotin (Vitamin B₇)." Biochemistry Department, Medical College of Alabama, Birmingham.

8. Casey, Dr. Albert E.; Dr. Frank M. Schabel, Jr., Dr. W. I. Fishbein and Dr. Herman N. Bundesen. "Poliomyelitis in an Urban Population." Department of Pathology and Bacteriology, Birmingham Baptist Hospitals; and Chicago Health Department, Chicago, Illinois.

9. Cotten, Dr. H. Brooks, and Dr. William H. Kessler: "Fibrocystic Disease of the Pancreas." Departments of Pathology, T. C. I. and Children's Hospitals, Fairfield and Birmingham, Alabama.

10. Crowe, Miss Mildred, and Mrs. Elizabeth Cooper: "History of Alabama Medicine." Medical Library, Medical College of Alabama, Birmingham.

11. Cunningham, Dr. Joseph A., and Dr. Wade Alford: "Melanomas." Departments of Pathology, Carraway Methodist, St. Vincent's and South Highlands Hospitals, Birmingham.

12. Fisher, Dr. G. E., and Dr. John S. Odess: "Obstructing Lesions of the Esophagus." Department of Otolaryngology and Bronchoscopy, Medical College of Alabama.

13. Galbraith, Dr. J. G., and Dr. S. E. Graham: "Sciatica due to Ruptured Intervertebral Disc—Myelographic Demonstration and Treatment." Department of Neurosurgery, Medical College of Alabama, Birmingham.

14. Kracke, Dr. Roy R.; Dr. William H. Riser, Jr., and Dr. Edwin C. Butterworth: "The L. E. Cell. Its Diagnostic Significance." Department of Hematology, Medical College of Alabama, Birmingham.

15. Kracke, Dr. Roy R., Dr. William H. Riser, Jr., Dr. Edwin C. Butterworth, and Dr. G. Hampton Smith: "The Treatment of Leukemia." Department of Hematology, Medical College of Alabama, Birmingham.

16. McManus, Dr. J. F. A.: "Carcinoma in Situ of the Cervix Uteri." Department of Pathology, Medical College of Alabama, Birmingham.

17. Noojin, Dr. R. O., and Dr. Hugh Praytor: "Fever Therapy." Department of Dermatology and Syphilology, Medical College of Alabama, Birmingham.

18. Schwartz, F. F.: "Physical Medicine and Rehabilitation." Birmingham.

19. Sherrill, Dr. J. D.; Dr. C. B. Bray; Dr. V. L. Bryant and Dr. D. G. Vesely: "1. Early Diagnosis. (a) Club Feet, (b) Metatarsus Varus (c) Congenital Dislocated Hip." Department of Orthopedic Surgery, Medical College of Alabama.

20. Sherrill, Dr. J. D.; Dr. E. C. Harris and Dr. M. Bernstein: "2. Intramedullary Nailing." Department of Orthopedic Surgery, Medical College of Alabama, Birmingham.

21. The Tumor Registry, Alabama Association of Pathologists, Supported by the Alabama Division, American Cancer Society, and Alabama and Jefferson County Departments of Health.

22. Volker, Dr. J. F.: "Sugar and Dental Caries." Dean, School of Dentistry, University of Alabama, Birmingham.

23. Waldrop, Dr. Edwin, and Miss Mary Frances James: "The Use of the Male Frog in a Test for Pregnancy." Department of Gynecology and Department of Bacteriology and Clinical Pathology, Medical College of Alabama, Birmingham.

24. Wise, Dr. Milton; Dr. Earl B. Wert and Dr. William W. Hurteau: "Amoebiasis." Departments of Pathology, Mobile Infirmary and The City Hospital, Mobile.

25. Alabama State Society of Medical Technologists.

26. Maternal Mortality in Alabama. Committee on Maternal and Child Health, Medical Association of the State of Alabama.

COMMERCIAL EXHIBITORS

Booth No.

1. Carnation Company, Oconomowoc, Wisconsin.
2. A. S. Aloe Company, St. Louis, Missouri.
3. A. S. Aloe Company, St. Louis, Missouri.
4. Ames Company, Incorporated, Elkhart, Indiana.
5. Eli Lilly and Company, Indianapolis, Indiana.
6. Whorton Pharmacal Company, Gadsden, Alabama.
7. U. S. Vitamin Corporation, New York, New York.
8. M & R Dietetic Laboratories, Incorporated. Columbus, Ohio.
9. Bilhuber-Knoll Corporation, Orange, New Jersey.
10. Ciba Pharmaceutical Products, Inc., Summit, New Jersey.
11. The National Drug Company, Philadelphia, Pa.
12. The Coca-Cola Company, New York, New York.
13. Van Pelt and Brown, Incorporated, Richmond, Virginia.
14. Sandoz Pharmaceuticals, New York, New York.
15. P. & S. Apothecary and Supply Company, Birmingham, Alabama.
16. P. & S. Apothecary and Supply Company, Birmingham, Alabama.
17. Mead Johnson & Company, Evansville, Indiana.
18. G. D. Searle & Company, Chicago, Illinois.

19. Durr Drug Company, Montgomery, Alabama.
20. Durr Drug Company, Montgomery, Alabama.
21. J. A. Majors Company, New Orleans, Louisiana.
22. McKesson & Robbins, Incorporated, Birmingham, Alabama.
23. McKesson & Robbins, Incorporated, Birmingham, Alabama.
24. McKesson & Robbins, Incorporated, Birmingham, Alabama.
25. The Doho Chemical Corporation, New York, New York.
26. The Borden Company, New York, New York.
27. Ayerst, McKenna & Harrison, New York, New York.
28. Walker Oxygen Therapy Company, Birmingham, Alabama.
29. Wyeth, Incorporated, Philadelphia, Pa.
30. General Electric X-Ray Corporation, Chicago, Illinois.
31. Picker X-Ray Corporation, Atlanta, Ga.

**THE SILVER ANNIVERSARY
OF THE
ANNUAL MEETING
OF THE
WOMAN'S AUXILIARY
TO THE
MEDICAL ASSOCIATION OF
THE STATE OF ALABAMA**

Tutwiler Hotel, Birmingham

April 20, 21, 1950

President

Mrs. William J. Rosser Birmingham

President-Elect

Mrs. J. G. Daves Cullman

Vice-Presidents

Mrs. H. R. Cogburn Mobile
Mrs. W. G. McCown Huntsville
Mrs. Fred D. Reynolds Montgomery
Mrs. Gilbert Greene Demopolis

Recording Secretary

Mrs. Paul S. Woodall Birmingham

Corresponding Secretary

Mrs. William M. Woodall Birmingham

Treasurer

Mrs. J. R. Chandler Bessemer

Historian

Mrs. DeWitt Faucett Gadsden

Auditor

Mrs. J. O. Morgan Gadsden

Finance

Mrs. Loren Gary, Jr. Tuscumbia

Program

Mrs. Josiah C. Carmichael Birmingham

Advisory Council

Dr. G. G. Woodruff, Chairman Anniston
Dr. Seale Harris Birmingham
Dr. J. Paul Jones Camden
Dr. W. R. Carter Repton
Dr. E. L. Gibson Enterprise
Dr. J. G. Daves Cullman
Dr. J. O. Finney Gadsden

Thursday, April 20

2:00 P. M.

Preconvention Executive Board Meeting

Presiding

Mrs. William J. Rosser, President

Mrs. J. G. Daves, President-Elect

To be represented at this meeting

In-Coming and Out-Going State Officers and
Committee Chairmen and County Presidents

Address—Mr. W. A. Dozier, Jr., Director of Public Relations, Medical Association of the State of Alabama.

Round Table Discussion—Directed by Mrs. Arthur A. Herold, President-Elect, Woman's Auxiliary to the American Medical Association, Shreveport, La.

Message from Dr. J. Paul Jones—What the State Medical Association Expects of its Auxiliary.

Barbecue for husbands and wives immediately following the Board meeting.

* * *

County Presidents—Please send reservations to Mrs. D. J. Coyle, 759 Linwood Rd., Birmingham.

* * *

Friday, April 21

9:00 A. M.

Tutwiler Hotel

Reports limited to *two minutes*

Time keepers: Mrs. Harvey Searcy,
Mrs. T. J. Payne, Jr.

PROGRAM

Call to Order—Mrs. William J. Rosser, President, Birmingham.

Invocation—Rev. Henry Gary, Birmingham.

Welcoming Address—Mrs. E. M. Norton, Birmingham.

Response—Mrs. W. Frank Jordan, Huntsville.

Greetings from the Woman's Auxiliary to the American Medical Association—Mrs. Arthur A. Herold, President-Elect, Shreveport, Louisiana.

Greetings—Dr. Frank Wilson, President, Medical Association of the State of Alabama.

Message—Dr. Roy Kracke, Dean of the Medical College of Alabama.

Announcements—Mrs. Ray Meade, State Commander and Executive Director of the Field Army of the American Cancer Society.

Mr. K. W. Grimley, Field Secretary, Alabama Tuberculosis Association.

Miss Margaret Cotton, Secretary, Alabama Heart Association.

Reading of the Minutes.

Annual Reports of Officers:

President-Elect—Mrs. J. G. Daves, Cullman.

First Vice-President—Mrs. H. R. Cogburn, Mobile.

Second Vice-President—Mrs. W. G. McCown, Huntsville.

Third Vice-President—Mrs. Fred D. Reynolds, Montgomery.

Fourth Vice-President—Mrs. Gilbert Greene, Demopolis.

Recording Secretary—Mrs. Paul S. Woodall, Birmingham.

Corresponding Secretary—Mrs. William M. Woodall, Birmingham.

Treasurer—Mrs. James R. Chandler, Bessemer.

Auditor—Mrs. J. O. Morgan, Gadsden.

Finance Officer—Mrs. Loren Gary, Jr., Tusculumbia.

President—Mrs. William J. Rosser, Birmingham.

Annual Reports of Standing Committees:

Press and Publicity—Mrs. R. E. Tyler, Birmingham.

Public Relations—Mrs. W. Frank Jordan, Huntsville.

Program—Mrs. Josiah C. Carmichael, Birmingham.

Hygeia—Mrs. F. C. Smith, Bessemer.

Mrs. E. M. Norton, Birmingham.

Little Daffin Perdue Scholarship—Mrs. E. S. Sledge, Mobile.

Archives and Exhibits—Mrs. J. Mac Bell, Mobile.

Research and Romance of Medicine—Mrs. Frank Chenault, Decatur.

Mrs. T. M. Guyton, Decatur.

Memorial—Mrs. J. R. Horn, Bessemer.

Bulletin—Mrs. T. D. Beatty, Cullman.

Legislative—Mrs. M. J. Roberts, Mobile.

Revisions—Mrs. T. E. Dilworth, Huntsville.

Doctor's Day—Mrs. J. C. Chambliss, Cullman.

Jane Todd Crawford Memorial Scholarship—Mrs. C. L. Salter, Talladega.

Parliamentarian—Mrs. N. T. Davie, Anniston.

Year Book and Members-at-Large—Mrs. E. F. Leatherwood, Hayneville.

Annual Reports of County Presidents:

Calhoun—Mrs. M. S. Adams, Anniston.

Colbert—Mrs. R. D. Wright, Sheffield.

Cullman—Mrs. J. C. Chambliss, Cullman.

Dallas—Mrs. Julian Howell, Selma.

DeKalb—Mrs. Claud D. Killian, Fort Payne.

Escambia—Mrs. George T. Perry, Brewton.

Etowah—Mrs. J. O. Morgan, Gadsden.

Jefferson—Mrs. W. N. Payne, Bessemer.

Jefferson—Mrs. R. C. Green, Birmingham.

Madison—Mrs. Harry J. Parker, Huntsville.

Marshall—Mrs. H. L. Rogers, Albertville.

Mobile—Mrs. M. J. Roberts, Mobile.

Montgomery—Mrs. H. L. Rosen, Montgomery.

Morgan—Mrs. John Chenault, Decatur.

Pike—Mrs. James O. Colley, Troy.

Talladega—Mrs. Robert Stock, Childersburg.

Tuscaloosa—Mrs. Harvey Searcy, Tuscaloosa.

Walker—Mrs. T. J. Payne, Jasper.

Report of Courtesy Committee—Mrs. E. J. Peterson, Birmingham.

Registration Committee—Mrs. L. P. Botta, Birmingham.

Credentials Committee—Mrs. J. R. Chandler, Bessemer.

New Business.

Report of Nominating Committee.

Election of Officers.

Installation of Officers—Mrs. W. M. Salter, Anniston.

Reading of Minutes.

Adjournment.

Friday, April 21

12:30 P. M.

Tutwiler Hotel

Luncheon

Mrs. R. C. Green, *Presiding*

Invocation—Rev. Paul Hardin, First Methodist Church, Birmingham.

Greetings—Mrs. S. J. Campbell, Birmingham.

Response—Mrs. G. G. Woodruff, Anniston.

Address—Senator Lister Hill, Washington, D. C.

Introduction of Guests and Officers and Committee Chairmen.

Committees—

Credentials—Mrs. D. H. Sparks.

Convention—Mrs. D. J. Coyle.

Registration—Mrs. L. P. Botta.

Courtesy—Mrs. E. J. Peterson.

Flowers—Mrs. W. O. Pardue.

Press and Publicity—Mrs. R. E. Tyler.

Transportation—Mrs. L. S. Smelo.

Our Silver Anniversary—Skit—By Mrs. H. L. Rosen, Montgomery.

(County Presidents—Please send reservations for luncheon to Mrs. D. J. Coyle, 759 Linwood Rd., Birmingham.)

Executive Board Meeting Immediately Following Luncheon

Fashion Show—Loveman's

Friday Evening

April 21

10 P. M.

Reception and Dance

Medical Societies and Auxiliaries invited.

ASSOCIATION ITEMS

HEALTH COUNCIL ELECTS DR. J. G. DAVES CHAIRMAN

At its annual meeting the Health and Medical Care Council of Alabama named Dr. J. G. Daves, Cullman, as its chairman for 1950. Dr. Daves was last year's vice-chairman, which position will be filled this year by Miss Roberta Morgan, Heflin. Mr. Walter Randolph, Montgomery, will continue his duties as treasurer, but the secretaryship will be handled by Mr. W. A. Dozier, Jr., Montgomery, who succeeds Mrs. Thelma Morris Coburn, Birmingham. Mr. Charles Dobbins, Montgomery, was re-elected to the six-man Executive Committee; and Mr. Phil Hudson, Opelika, was also named to this Committee.

HOTEL RESERVATIONS, ANNUAL SESSION

Dr. Landon Timberlake, the Jefferson County Medical Society's Hotel Committee Chairman for the 1950 meeting of the State Medical Association, will be glad to assist members of the Association in procuring

hotel reservations if they are experiencing any difficulty in doing so. Dr. Timberlake may be addressed at 2121 Highland Avenue, Birmingham; and he suggests that first, second and third choices be specified.

A. A. G. P. ELECTS NEW OFFICERS

On January 18, the Alabama Academy of General Practice at its annual meeting held at the Tutwiler Hotel, Birmingham, named its new officers for the coming year. Dr. J. Paul Jones, Camden, who was president-elect, has assumed the duties of president, and Dr. Albert S. Dix, Mobile, was made president-elect. Previously there was only one vice-president; but in keeping with an amendment to the constitution of the Academy, the following general practitioners were elected vice-presidents: Dr. John E. Foster, Lineville; Dr. George W. Newburn, Mobile; and Dr. Greene H. Smith, Ensley. Dr. Tom D. Spies, Birmingham, will succeed Dr. N. Bograd, Montgomery, as a member of the Board of Directors, which Board has as its chairman the retiring president, Dr. George S. Peters, Montgomery.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

A LOCAL HEALTH COUNCIL

W. A. Dozier, Jr.
Director of Public Relations

During the last few years much has been heard of or read about health councils of one type or another. Just what is this health council some leaders are calling for? Basically a health council is nothing more than a group of people, lay and professional, who are interested in the health of a community and who are banded together for the purpose of doing constructive work toward settling the existing problems in health and medical care. It is as simple as that.

The primary function of a health council is, of course, to improve the situation found to exist in health and medical care, but this purpose encompasses many necessary facets. For example, the improvement can come only after the picture of existing conditions is well known and aims or projects can be

drawn from the then known circumstances. But even before this progress can be made, the people of a locality, and especially its leaders, must be informed so that they may see the functions and values of a properly working council. The groundwork is tremendous even before any constructive measures may be undertaken.

So often there is a lack of proper groundwork. As one example, in one county in Alabama an organizational meeting was held. Everyone pledged himself to better health and an extension of medical care, and officers were elected. Since then nothing has happened. About a year later one person who was at the meeting asked an outsider what it was all about. In the words of the questioner, "There were a lot of 'mother, God and country' speeches, but no one knew what the hell was going on!" Somebody failed to carry out the proper

background work and naturally nothing tangible grew out of this organization.

Despite what some physicians say, leadership in a health council should come from the medical profession. This is only natural. The physicians are, by their profession, more closely associated with health and medical care than are other people. Because of this they naturally see the problems clearly and also know the whole picture. Too, their interest in the field is obviously greater than that to be found in other groups who are concerned primarily with their own health and not the overall picture of the community.

There are many values to be received from such a council, but perhaps the greatest one is to be found in local people meeting their local needs. It is foolish to assume that the President of the State Medical Association can know the problems facing the people in Dothan or any other town removed from the President's immediate vicinity. Only through proper knowledge of the immediate situation may a real solution be found. Also, one must not overlook values such as lay support in health projects, combined ideas and solutions as over and against unilateral decisions, and an increased interest through-

out the community on matters pertaining to health and medical care.

In Alabama we have a state group, the Health and Medical Care Council of Alabama, which has been in operation for some three years now and which has done some good work. There are also some county councils, but by and large these have not been too active. Of course there are exceptions to be found in such groups as the Sumter County Council which has done an outstanding job. More county councils are needed, and the emphasis for the state council during the coming year will be to help in any way possible the institution of these needed county groups.

There is one great problem facing the new councils which will be formed as well as the older councils, and this is the problem of human inertia. There must be a group of leaders in each council and then there must be a motivated and active membership. It seems that the medical profession should and must assume the responsibility for forming these councils and for motivating the members. It's a large job but one that can surely be of great value to the community and thereby to the profession.

WOMAN'S AUXILIARY

Mrs. W. J. Rosser, President

DOCTOR'S DAY

(A letter from Mrs. Rosser)

March 30 is Doctor's Day. This letter is to remind you to make plans for some appropriate recognition of our doctors on this day.

The observance of Doctor's Day creates an excellent opportunity for some favorable publicity for the medical profession. In order to receive good publicity, you will perhaps need information concerning the origin of Doctor's Day.

In 1934 the Auxiliary to the Southern Medical Association adopted a resolution which designated March 30 as Doctor's Day, its object being to honor the medical profession and pay tribute to the doctors. This particular day was selected in memory of that March 30, 1842 when Dr. Crawford

Long employed ether for the first time as an anesthetic in a surgical operation. The first observance was held in Atlanta, Ga. in 1935 and since that time most of the Southern States have observed that day. The observance of Doctor's Day has now become national but the states other than the Southern States have not designated a definite date but have planned their observance on convenient dates.

Please plan a definite program for Doctor's Day on or as near March 30 as possible. The observance of Doctor's Day by any local group can and should be worked out so that it is suitable to the size of the group as well as to the interests of the doctors in your community. In the past some Auxiliaries have given dinner dances; others, covered dish suppers, or a party for their

doctors. One gave a box supper and used the proceeds to provide a nurse scholarship. Some Auxiliaries have provided a flower for each doctor to wear in his lapel on March 30th and then arranged for good publicity concerning the wearing of the flowers. At the meeting of the Southern Auxiliary in Cincinnati in 1949 the red carnation was adopted as the official flower for Doctor's Day. The important thing in observing the day, by giving either flowers or a flower, is to see that no doctor is forgotten or overlooked and that the newspapers carry appropriate publicity concerning it. One method of distributing individual flowers is to place Auxiliary members at the door of each hospital and give each doctor a flower as he enters. Of course, with this arrangement, it will be necessary to make some provision to reach those that are not at the hospital on that day. If at all possible be sure to plan a social function in honor of your local Medical Society and have some tribute to the doctors placed in your newspapers. If there are any doctors who are ill or shut in, by all means send them cards or a flower.

In the event it is possible for a unit to have a celebration in honor of Doctor's Day, there is opportunity in many communities to procure some good publicity concerning the day and the progress of medical science and the value of our doctors to humanity. Last year one editor of a small Oklahoma newspaper, after being informed by the local Auxiliary concerning the observance of the day, wrote an excellent full column editorial and got in a very effective plug against socialized medicine.

Two prizes will be awarded for the most unique and original celebration of Doctor's Day: a \$10.00 cash prize for first place and a \$5.00 cash prize for second place. The judging will be done by a committee of five appointed by our Southern Auxiliary president, Mrs. Haynes. Please send three copies of what you did to Mrs. J. P. Chambliss, Cullman, Alabama.

Can I count on you to place a red carnation on every doctor March 30?

Notice To All Convention Representatives Who Make Written Reports

It is requested that all reports be written on the typewriter, double-spaced on regular

size white paper (size 8½ x 11"). Please make three copies, one to be kept by the writer and the other two to be sent to the State President. These reports will be uniformly compiled in booklet form, one set to be sent to National Headquarters and the other kept by the State Association.

These reports are to be in the hands of Mrs. W. J. Rosser, 2721 Hanover Circle, Birmingham, Alabama not later than April 10.

Please notice: Convention program, Friday, April 21, 9 A. M. Reports of all State Officers, Committee Chairmen and County Presidents are limited to *Two Minutes*. Please check the reading time of your report, so that the time keepers, Mrs. Harvey Searcy and Mrs. T. J. Payne, Jr., will not have to call time on you.

The Acute Abdomen—Although this belongs to the realm of the internist, the general practitioner as well as the surgeon must be on his guard to avoid the fatal error of confusing an acute coronary disease with an acute abdominal condition.

Men are most susceptible to this condition, and it is usually found in those past the age of forty. A previous history of dyspnea or pain in the chest during exertion or excitement may be elicited. The attack is sudden, with severe pain in the chest which radiates out the left arm, towards the abdomen or both shoulders. There is a sense of impending death with severe fright which usually supersedes the complaint of pain. The radiation may also be toward the epigastrium, so that the examiner's attention is directed to the abdomen rather than the chest. A usual complaint during such an attack is one of "indigestion." Although the pain of acute coronary disease may occur in the abdomen, it does not become localized; hence, no area of local abdominal tenderness is ever found. Marked abdominal distention may be present in coronary disease, but muscle defense or rectus rigidity is lacking. In abdominal catastrophes the patient lies perfectly quiet, but the coronary patient resembles the colic patient in that he is restless and tosses about. The acute cardiac patient presents veins in the neck which are distended and full, in contrast to the patient with the surgical abdomen who may appear pale and bloodless. Signs of impaired circulation are usually present, such as dyspnea, orthopnea and cyanosis. Auscultation will usually reveal rales in both bases due to pulmonary congestion. Cardiac enlargement, feeble heart sounds and occasionally a pericardial friction rub may be found. During auscultation of the abdomen, normal intestinal sounds will be heard which are absent or diminished in cases of peritonitis.

Positive electrocardiographic findings are pathognomonic, but one is not always fortunate enough to have an electrocardiogram handy.—*Thorek, South. M. J., Feb. '50.*

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

PROGRESS IN THE TREATMENT OF RHEUMATIC DISEASES

You have frequently been urged not to be too greatly concerned about death rates. A disease that kills tremendously large numbers of people may not be as serious a problem as one with a relatively low death rate, you have been told. Other factors need to be considered: When is a certain disease most fatal? Are its victims mainly young people in their prime? Or do they succumb to it in the sunset years, after long, useful lives? Do those it kills die fairly quickly after being attacked? Or is death preceded by a long period of invalidism? Does the mode of treatment involve expensive medical, hospital or nursing care? Or can the victim regain his health—or await death, if the disease is fatal—in his own home, where he follows simple routines prescribed by his physician? Does this disease impair personal efficiency? Does it keep people away from their jobs for long periods? Does it have a marked effect upon absenteeism? Is recovery, when it comes, complete or only partial? Must the victim spend the rest of his life under the dark, forbidding cloud of threatened recurrence of illness? There are many other matters that need to be considered.

Such considerations have a particular place when we try to evaluate the condition that is the subject of our present paper. It has a rather familiar-sounding ring. It is rheumatic disease.

You may have had rheumatism as a child and gotten over it. You may not consider it a serious matter. But *rheumatic disease* is a broad term. It covers a great deal more than rheumatism. It includes, among a number of others, such troublesome conditions as rheumatic heart disease and arthritis.

Rheumatic fever and rheumatic heart disease are the chief killers of boys and girls between five and 19 years of age. The entire group of rheumatic fever diseases is said

to affect more than seven and a half million people at the present time in the United States. That means about one American out of every 20, or five per cent.

The economic burdens imposed by these diseases are heavy indeed. Let us have the verdict of someone in a particular position to know whereof he speaks. He is a spokesman for the Arthritis and Rheumatism Foundation, with headquarters in New York City. He said:

"Almost 100 million work days are lost each year. An army of 320,000 unemployed is created. Our taxes for relief go up and, as a result, we foot an additional bill of some \$100,000,000 each year for medical care . . . More than 147,000 are completely disabled. . . . Some 800,000 are partially incapacitated. And more than six million suffer the recurrent or chronic pain of arthritis and rheumatism . . . In wages lost, rheumatism victims are penalized \$520,000,000 a year . . . Add to that about \$128,000,000 a year spent by taxpayers for relief allowances, and you get a total of some \$750,000,000 lost each year because of rheumatism and arthritis."

Each disease, of course, offers a peculiar problem. Medical science and public health workers study its peculiarities. They attack it, if they can, at its weakest points, like an army thrusting itself against an enemy in battle. But sometimes it is hard to determine which are a disease's weakest points. Sometimes indeed it seems questionable whether it has any. That might be said of arthritis and rheumatism, probably the most troublesome of those we are considering.

In general, it is easier to curb a contagious, or infectious, disease than one that is not contagious. For then you have some definite means of attack. All you have to do is to break the chain of infection. That can be done in several ways. You can isolate the sick person, preventing others from getting close enough to him to pick up his germs. You can make his sputum harmless by sterilizing everything he puts into his mouth and burning the articles he uses that cannot be sterilized. You can give others a wall of defense against his germs by means of immunization. You can build up general resistance to infection by keeping yourself and others, insofar as possible, in good

general condition. You can protect the well in other ways.

But no such protective measures are at hand when you are trying to protect people against non-contagious diseases. Becoming sick is not a result of certain well-defined processes that you can interrupt. You get one of them in about the same way and for about the same reason that your car or heating system gets out of order. There is a breakdown of some kind within the organism itself. It may be due to abuse. It may be due to age. It may be due to inherent weakness. And of course it may be due to damage done by germs of infectious diseases.

Arthritis and rheumatism are non-infectious. As a spokesman for the Arthritis and Rheumatism Foundation declared some time ago: "For that reason, we can't reduce the number of cases by merely isolating the sick from the healthy and thereby prevent further spread of the disease."

What, then, can we do to curb these great cripplers and killers?

That same spokesman for the Arthritis and Rheumatism Foundation has suggested a means of attack. He said:

"Logically, it would seem that the next approach would be to strike at the cause of the disease . . . We might even try going after the nests where the disease breeds—like draining swamps in yellow fever areas . . . But here, too, we are handicapped. Arthritis and rheumatism are not spread by a germ or germ-carrying insect or animal."

The medical profession and public health agencies are handicapped in an even more serious way: They are not sure they know exactly what causes rheumatism and arthritis. This does not mean of course that they are dealing with conditions about which they have little information. Actually, they know a great deal about these diseases. They have labored diligently, especially in recent years, to unearth hidden and treacherous secrets. But the simple and unfortunate truth is that they have no very definite knowledge as to what causes them. They do not know, for instance, whether one thing or several things are responsible. Nor do they know what that thing, or things, are. Indeed they are not even sure they are correct in saying it is not spread by germs or a virus.

Our medical leaders have learned this much, however: that early discovery and prompt treatment are beneficial in these diseases, as in most others. To that end, they recommend regular physical examinations. These, they say, should be undergone at least once a year. This good advice applies to people of all ages. For these diseases attack the young and the aged with grim impartiality.

Perhaps you have heard and read about the new hormone drugs which are said to promise great things for victims of arthritis and other rheumatic conditions. Your State Health Department hopes you have not been led to expect too much from them. They are expected to prove helpful. But they are not, yet at least, the answer to the arthritis and rheumatic heart disease problem. Sober-minded men and women of medicine expect these problems to be still with us, even after these two products—Cortisone and ACTH—have been put into general use.

Neither of these products is a cure for these conditions. That needs to be made clear. You cannot take either of them and recover from arthritis or rheumatic heart disease in the sense that you recover from appendicitis after a surgical operation. Would that you and millions of other victims could! Their effect is much like that of insulin when given for diabetes. You cannot take insulin over a comparatively brief period and then consider yourself free from diabetes for the rest of your life. You enjoy that freedom only as long as you keep up the treatments. Drop them, or even become careless about taking them, and you find yourself back where you started from. And the same is true when the disease is arthritis or rheumatic heart disease and the treatment is Cortisone or ACTH. They merely relieve the symptoms as long as their use is continued. Soon after it ends, these symptoms return.

This important difference between relief of symptoms and permanent cure was emphasized by a speaker at a recent meeting in this state. He was Dr. Russell Cecil, professor of internal medicine at Cornell University. The occasion was a seminar at the Veterans Administration Hospital, in Tuscaloosa.

As yet, he said, there is no cure at all for crippling arthritis. However, he added, these two drugs are helpful.

Dr. Cecil used a strong word to describe the temporary effects of both Cortisone and ACTH. That word was *miraculous*. But, he went on, "arthritis thus far always comes back."

The Cornell University authority on rheumatic diseases, who spent his boyhood in this state (at Selma), also called attention to another drawback which prevents these drugs from reducing the arthritis problem to a simple solution: They are scarce and therefore expensive. Even when one can be obtained, he said, it might be necessary for the patient using it—or his family or generous friends—to pay as much as \$600 a month for the amount required. This cost is well-high prohibitive when you consider that it must be administered as long as relief is obtained.

Nevertheless, these two drugs offer strong promise. If they, expensive and scarce as they are, can bring temporary relief, perhaps others somewhat like them can bring permanent cures. And those hoped-for drugs of the future should be produced in large quantities and at prices the average person could afford to pay. So Cortisone and ACTH are entitled to the serious consideration of our scientists and men of medicine. It goes without saying that they are receiving it.

Whatever contribution these drugs may make to the eventual conquest of rheumatic heart disease and arthritis may be said to be due to a false rumor. Like so many other rumors, true and false, it sprang out of the fruitful soil of the second World War.

The story of that false rumor that may bring a real cure, sooner or later, for some of mankind's greatest diseases, was related by the man who invented Cortisone. He is Dr. Edward C. Kendall, a biochemist of the Mayo Clinic at Rochester, Minnesota. He told it in a broadcast of the University of Chicago Round Table.

During the war, he said, the Allies heard a rumor that the Germans were buying up all the adrenal glands they could get in the slaughter houses in Argentina. An extract made from those glands, so the rumor went, made it possible for Nazi fliers to keep their

planes at heights of 40,000 feet and fight without discomfort or loss of combat ability.

"The rumor persisted, even though untrue," Dr. Kendall went on, "and was a real stimulus" to research in this country. One of the fruits of that research was Cortisone, also known as Compound E.

Although himself the discoverer of Cortisone, Dr. Kendall gave credit for its first use in the treatment of arthritis to one of his associates at the Mayo Clinic. Dr. P. S. Hench, he said, is the one who suggested that it be used for that disease. The results, he added, were "encouraging."

ACTH is now being made from the pituitary glands of hogs, the speaker told his radio audience. Its effect is to stimulate the human body to produce its own Cortisone, he explained.

Dr. Kendall and other speakers emphasized that only extremely small amounts of each drug are now being produced.

On the whole, the victims of rheumatic diseases seem to have a substantially brighter outlook than they had even a few years ago. But they should not expect too much. And they should not expect a revolutionary change in treatment procedures too soon.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

THE YEAR 1949

Examinations for diphtheria bacilli and Vincent's	3,855
Agglutination tests (typhoid, Brill's and undulant fever)	14,746
Typhoid cultures (blood, feces and urine)	5,546
Examinations for malaria	8,795
Examinations for intestinal parasites	47,370
Serologic tests for syphilis (blood and spinal fluid)	312,839
Darkfield examinations	156
Examinations for gonococci	26,315
Examinations for tubercle bacilli	34,404
Examinations for meningococci	8
Examinations for Negri bodies (microscopic)	1,148
Water examinations	17,179
Milk and dairy products examinations	52,808
Miscellaneous	3,894

Total 529,063

* * *

JANUARY 1950

Examinations for diphtheria bacilli and Vincent's	371
Agglutination tests (typhoid, Brill's and undulant fever)	1,152
Typhoid cultures (blood, feces and urine)	394
Examinations for malaria	302
Examinations for intestinal parasites	4,666
Serologic tests for syphilis (blood and spinal fluid)	26,049
Darkfield examinations	14
Examinations for gonococci	2,094
Examinations for tubercle bacilli	3,222
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	94
Water examinations	1,429
Milk and dairy products examinations	4,070
Miscellaneous	1,783
Total	45,640

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1949-1950

	Dec. '49	Jan. '50	E. E.* Jan.
Typhoid	3	2	2
Undulant fever	6	4	11
Meningitis	6	3	2
Scarlet fever	103	81	75
Whooping cough	16	31	80
Diphtheria	28	37	55
Tetanus	2	2	0
Tuberculosis	198	148	259
Tularemia	0	2	2
Amebic dysentery	2	0	2
Malaria	1	1	4
Influenza	203	753	397
Smallpox	0	0	0
Measles	36	135	1570
Polioomyelitis	9	6	8
Encephalitis	0	0	0
Chickenpox	153	310	466
Typhus	10	9	8
Mumps	75	124	178
Cancer	423	349	317
Pellagra	2	1	2
Pneumonia	307	252	259
Syphilis	670	750	633
Chancroid	9	13	6
Gonorrhea	435	388	533
Rabies—Human cases	0	0	0
Positive animal heads	30	37	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

As a result of intensive studies during the past few years, evidence has accumulated which suggests that histoplasmosis—formerly believed to be a rare and usually fatal disease—also exists as a mild asymptomatic syndrome which is very prevalent in certain parts of the world. Although quite typical cases of clinical histoplasmosis are probably much more frequent than previously thought, the principal significance of the asymptomatic form is that in certain respects the disease so closely resembles tuberculosis as to be frequently confused with it.—*Michael L. Furcolow, M. D., Pub. Health Rep., Nov., 1949.*

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR NOVEMBER 1949, AND COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During Nov. 1949			November Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	6738	**	**	25.6	28.6	25.4
Total stillbirths	202	**	**	29.1	23.0	30.2
Deaths (stillbirths excluded)	2282	1267	1015	8.7	8.1	7.9
Infant deaths:						
under one year	285	134	151	42.3	36.4	36.0
under one month	203	100	103	30.1	25.2	26.6
Cause of Death						
Tuberculosis, 001-019	83	38	45	31.5	25.7	27.6
Syphilis, 020-029	28	9	19	10.6	4.6	10.1
Typhoid and paratyphoid, 040-041	1	1		0.4	0.4	
Dysentery, 045-048	2	1	1	0.8	***	***
Scarlet fever, 050					0.4	
Diphtheria, 055	3	3		1.1	2.3	0.8
Whooping cough, 056	1		1	0.4	1.2	1.9
Meningococcal infections, 057	1	1		0.4	1.2	
Polioomyelitis, 080, 081	2	1	1	0.8		
Measles, 085						0.4
Malaria, 110-117	1		1	0.4	0.4	0.4
Malignant neoplasms, 140-200, 202, 203†	218	145	73	82.8	85.6	66.4
Diabetes mellitus, 260	29	19	10	11.0	13.4	8.1
Pellagra, 281	6	4	2	2.3	2.7	4.3
Vascular lesions of central nervous system, 330-334	252	125	127	95.7	81.4	76.4
Other diseases of nervous system, 300-318, 340-398	30	12	18	11.4	13.4	***
Rheumatic fever, 400-402	7	1	6	2.7	0.8	***
Diseases of the heart, 410-443	664	403	261	252.1	206.5	201.4
Diseases of the arteries, 450-456	25	15	10	9.5	7.3	12.4
Other diseases of the circulatory system, 444-447, 460-468	26	12	14	9.9	3.1	***
Influenza, 480-483	14	7	7	5.3	4.6	6.2
Pneumonia, 490-493	86	47	39	32.6	36.8	27.6
Bronchitis, 500-502	3	2	1	1.1	3.1	0.8
Appendicitis, 550-553	9	5	4	3.4	3.1	1.9
Intestinal obstruction and hernia, 560, 561, 570	14	8	6	5.3	4.6	4.3
Gastro-enteritis and colitis (under 2) 571.0, 764	12	5	7	4.6	5.4	3.1
Cirrhosis of liver, 581	17	10	7	6.4	2.3	5.0
Diseases of pregnancy and childbirth, 640-689	18	10	8	25.9	14.4	20.7
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 681, 682, 684	3	2	1	4.3	1.3	3.0
Congenital malformations, 750-759	29	21	8	4.3	4.7	***
Accidental deaths, total, 800-962	174	110	64	66.0	62.9	62.1
Motor vehicle accidents, 810-835, 960	71	45	26	27.0	26.9	28.3
All other defined causes	403	213	190	153.0	170.8	221.2
Ill-defined and unknown causes, 780-793, 795	124	39	85	47.1	54.9	47.0

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the November report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204) and mycosis fungoides (205).

BOOK ABSTRACTS AND REVIEWS

The Eye and Its Diseases. By Ninety-Two International Authorities. Edited by Conrad Berens, M. D., F. A. C. S., Managing Director of The Ophthalmological Foundation, Inc.; President, Snyder Ophthalmic Foundation; President, American Academy of Ophthalmology and Otolaryngology; Diplomate and former Member, American Board of Plastic Surgeons; President, Pan American Association of Ophthalmology; formerly President of the Section on Ophthalmology of the American Medical Association; Fellow of the American Ophthalmological Society; Fellow of the American Illuminating Engineering Society; Fellow of the Aero-Medical Association; Vice-President, National Society for the Prevention of Blindness; Vice-President, International Society for the Prevention of Blindness. Second edition. Cloth. Price, \$16.00. Pages 1092, with 436 illustrations, eight in color. Philadelphia and London: W. B. Saunders Company, 1949.

This volume follows the outline of the first edition in its aim to present the essentials of ophthalmology, its more important recent advances, and to give a practical reference book to both the experienced practitioner and the student.

Ninety-two international authorities have cooperated in the compilation of this very complete book. New knowledge and research have allowed for more brevity in some of the chapters. A style of printing has been adopted wherein there are two columns to a page which makes for easier reading. There has been a revision of his section by each of the contributors, with the addition of several new chapters, including light and lighting, treated very thoroughly by Dr. Walter B. Lancaster; also chapters on physiologic chemistry and gonioscopy. The therapeutics of antibiotics have been carefully considered.

There has been very little duplication of material due to the excellent editing. The introductory chapter of Shastid is a history of ophthalmology in brief form. Gross anatomy of the orbit has been presented by S. E. Whitnall very thoroughly, and microscopic anatomy by others. There is a condensed chapter on the antenatal and postnatal development of the human eye by Ida Mann; and neuroanatomy of the movements of the eyes by A. Biemond. Other chapters deal with the refraction of the eye (Alfred Cowan), routine examination of the eyes (S. Judd Beach), ophthalmoscopy (LeGrand H. Hardy), perimetry (Traquair), gonioscopy (Trancoso), bronchoscopy (Rehsteiner), pathology (Greeves), diseases of the conjunctiva (Thygeson), diseases of the cornea (Doggart), glaucoma (Gradle—revised by Duke-Elder), and medical ophthalmology (R. Foster Moore and H. B. Stallard). The chapter on motor anomalies of the eye has been rewritten by Conrad Berens and Paul T. McAlpine. Three chapters are devoted to the eye

and the nervous system. The chapter on general and local treatment has been extensively revised.

With all this material contained in one volume it follows that its scope and inclusiveness is quite comprehensive, and most subjects are presented quite extensively, but the impression is gained that some of the chapters are too abbreviated. There is an extensive bibliography for each chapter, including the most recent references.

A very complete and well arranged index promotes facility in locating a subject.

This is a most unusual and comprehensive volume. Both student and experienced practitioner will profit by consulting this book.

D. S. Hagood, M. D.

Self-Teaching Tests in Arithmetic for Nurses.

By Ruth W. Jessee, R. N., M. A., Director of Nursing Education, Presbyterian Hospital, Philadelphia. Third edition. Paper. Price, \$2.00. Pp. 122. The C. V. Mosby Company, St. Louis, Missouri, 1949.

This is a work-book and text in arithmetic designed for the use of student nurses. The book is composed of two parts. The first part deals with fractional quantities as applied in the apothecaries' and metric system of measurement. The second part applies proportion to the solving of problems dealing with solutions. The principles of methods used are explained and practice problems are given. The author recommends that this book be supplied to prospective student nurses whose background in arithmetic is poor. As a work-book and adjunct to texts on pharmacology, this book should meet a need in our schools of nursing.

Pearl Barclay, R. N.

Oral and Dental Diagnosis: With Suggestions for Treatment. By Kurt H. Thoma, D. M. D., F. D. S. R. C. S. Eng., Professor Emeritus of Oral Surgery, and Brackett Professor of Oral Pathology, Harvard University. With contributions by Henry Goldman, D. M. D., Head of the Dental Department, Beth Israel Hospital, Boston; Fred Trevor, D. M. D., formerly Instructor in Oral Pathology, Harvard Dental School. New, 3rd edition. Cloth. Price, \$9.50. Pp. 563, with 776 illustrations, 60 in color. Philadelphia and London: W. B. Saunders Company, 1949.

According to the preface, it is the author's intention to supply a ready reference book for practitioners requiring information quickly. It is also a good text for teaching medical and dental students. He deals mainly with his extensive and various experiences in his hospital connections and his private practice. The author gives broad views of both medical and dental relations. The

volume is rich in information regarding every phase of diagnosis, not only relating to the dental field but also the medical field as well; and gives the general practitioner, both dentist and physician, an understanding of diagnostic principles.

The emphasis throughout is on good factual rather than theoretical information since the author has had ample facilities through which to obtain such information.

The fore part of the book deals with principles and methods of examination and diagnosis, and is subdivided into twelve chapters, including care, history, physical examination, laboratory tests, investigation of deficiency states, special examinations for dental and oral diseases, roentgen examination, with methods of obtaining same, and some x-ray plates. There follow: consultation, diagnosis, prognosis, treatment planning and final examination.

Each chapter is well supplied with clear illustrations describing each condition plainly and giving several types of treatment which have been tried by the author and others. The volume gives a synopsis of treatment indicated for the conditions discussed. These suggestions are helpful to both students and general practitioners.

Illustrations have been copiously supplied, particularly of cases that are rarely seen; also, different lesions in the same locations are so placed as to make proper comparison, like gross pathology, roentgen pictures, and change discernible under the microscope. A glossary of terms used to describe symptoms and signs of oral lesions is provided, as well as a bibliography of articles recommended for further study.

All in all, the book is the simplest available for ready reference.

Morris N. Capouya, D. D. S.

Outwitting Your Years. By Clarence William Lieb, M. D. Cloth. Price, \$2.75. Pp. 278. New York: Prentice-Hall, Inc., 1949.

This book contains a great deal of valuable advice which is primarily intended for those past forty. The commonsense advice given by the author is very practical and is instructive to the physician as well as his patients. The various problems of aging and their solution for a healthy, happy, useful life are discussed at length.

Charles A. Willis, M. D.

Clinical Case Taking. Guides for the Study of Patients. By George R. Hermann, M. D., Ph. D., Professor of Medicine, University of Texas. 4th edition. Cloth. Price, \$3.50. Pp. 240. St. Louis: C. V. Mosby Company, 1949.

This text appears to be written primarily for medical students. It is a very detailed exposition of the practice of history taking and physical examination. Over half of the book is devoted to what the author calls semiology of diseases, by which is meant "the interpretation of symptoms and signs in terms of pathologic physiology." The book is undoubtedly of value to the student, particularly for rapid review, and even the prac-

titioner may derive some benefit from this little text.

It suffers, however, from the fact that it makes for difficult reading and presents for each group of diseases long lists of symptoms listed one after the other thus tending to lose much of their meaning.

The book contains an appendix consisting of differential diagnosis of some common symptoms. This section, while it may be of some value for a quick review, is not extensive enough or detailed enough to be used as a reference. The entire text may be described as a condensed summary, rather than a detailed textbook.

While it is a good book for hospital or school libraries, it is by no means a must for the practicing physician's personal collection.

S. J. Selikoff, M. D.

Clinical Ascultation of the Heart. By Samuel A. Levine, M. D., Clinical Professor of Medicine; and W. Proctor Harvey, M. D., Research Professor in Medicine, Harvard Medical School. Cloth. Price, \$6.50. Pp. 327, with 286 illustrations. Philadelphia: W. B. Saunders Company, 1949.

This is a very excellent book which would be of value to anyone in the practice of medicine. However, its greatest value would be to those primarily interested in diseases of the heart.

It is written by two well known authorities on diseases of the heart and takes up all phases of the auscultatory findings of the heart in health and disease.

The method of the production of the normal heart sounds and the variation of the normal sounds are discussed in detail.

There are chapters dealing with cardiac irregularities and murmurs and one on miscellaneous findings in various diseases. In these chapters the auscultatory findings of various diseases are described and there are numerous illustrations of sound tracing and electrocardiograms.

Charles A. Willis, M. D.

Psychiatry in General Practice. By Melvin W. Thorner, M. D., D. Sc., Assistant Professor of Neurology, The Graduate School of Medicine, University of Pennsylvania. Cloth. Price, \$9.50. Pp. 649. Philadelphia and London: W. B. Saunders Company, 1948.

Here, at long last, is a book to gladden the heart of the general practitioner. The quality that distinguishes it from so many that have been published for this class of reader is the author's obvious and successful effort to avoid presenting the field of psychiatry as a polysyllabic briar-patch. None will deny that the task of simplification is a difficult and hazardous one, requiring not only an unquestioned command of the subject but, in addition, and more important still, a literary skill and eloquence, given to few who have undertaken the job thus far. Dr. Thorner has both.

The book is divided into three sections. The first is introductory, and the author indicates as

his goal the desire to provide a work which presents "those aspects of psychiatric theory and practice which are of concern to the general practitioner," avoiding "the formidable terminology" and "the impalpable distinction between the proven and the unproven."

Section two is labelled "The People" and that is precisely what the author presents—people rather than clinical entities, taking on substance and color under the author's facile pen. The author provides longitudinal case histories in narrative form with pithy marginal notations, pointing up psychiatrically significant trends as each history unfolds. He passed over the psychiatric classification table, covering it quite thoroughly, yet departing from it to label the various categories in such familiar and less awe-inspiring terms as "Dull People," "Unhappy People," "Dreamy People," "People and Sex," etc. One rather doubts that this departure will measurably affect the utility of the author's system for the general practitioner. Rather, it should make diagnosis and classification simpler. Humor is slyly injected to further clear the atmosphere of any suggestion that this is a solemn text, written in a spirit of rigid and solemn dedication.

The book would have better served its classified readers had it assigned to the psychoneuroses a wider covering, in proportion to their significance to the general practitioner. A similar objection may be raised against the few paragraphs devoted to psychosomatics.

The third section deals with "Methods" and within the stated goals of the author it covers both examination and treatment adequately. Assuming that the general practitioner would limit himself to the more superficial levels of psychiatric therapy, the author eschews unnecessary detail. One would question the suggestion that psychosurgery is a procedure of last resort, although the whole topic is still in flux. Considerably more emphasis is placed on office therapy than the practitioner may himself undertake than on the more elaborate therapeutic techniques that are confined to the specialist. Appended are classification of mental disorders and commitment procedures.

This book and others like it might well dissipate the concept that psychiatry is a bubbling cauldron of fustian and phonetics, guarded over by an esoteric fraternity whose members haven't the faintest notion of what goes on in a general practitioner's office. It is best suited for comfortable arm chair reading rather than for study. It teaches by impression rather than by elusive fact. It is a good book, well worth having.

Philip S. Bazar, M. D.

How to Become a Doctor. By George R. Moon, A. B., M. A. Cloth. Price, \$2.00. Pp. 131. Philadelphia and Toronto: The Blakiston Company, 1949.

This book is a guide to those who are contemplating becoming a doctor, dentist, veterinarian,

pharmacist, optometrist, chiroprapist, occupational therapist, hospital administrator, medical illustrator or scientist.

Entrance requirements, schools, the manner in which to make application are all discussed. This type of book would be valuable in the high school or college library.

Charles A. Willis, M. D.

Clinical Pathology. Application and Interpretation. By Benjamin B. Wells, M. D. Ph. D., Professor of Medicine, University of Arkansas School of Medicine, Little Rock. Cloth. Price, \$6.00. Pp. 397. Philadelphia: W. B. Saunders Company, 1950.

The purposes of this book are: (1) to show which tests are indicated in various clinical conditions; (2) when said tests are the most valuable; (3) the limitations to be imposed on their interpretations; and, lastly, the author cautions against the unnecessary use of laboratory procedures resulting in needless expense to the patients.

The appendix on Laboratory Aid in Symptom Diagnosis should prove helpful to most of us.

It is well indexed, clearly written, and free of trivialities. Most men in practice should find this volume very helpful.

Woodfin Cobbs, M. D.

Medical State Board Questions and Answers. By R. Max Goepp, M. D., formerly Professor of Clinical Medicine, Graduate School of the University of Pennsylvania, and Professor of Medicine, Woman's Medical College of Pennsylvania; and Harrison F. Flippin, M. D., Associate Professor of Medicine at the Graduate School of the University of Pennsylvania. Eighth edition. Cloth. Price, \$7.00. Pp. 663. Philadelphia and London: W. B. Saunders Company, 1950.

Even as Noah Webster's name is attached to the dictionary and Gray's to the best known of the texts on human anatomy, so is Goepp's to State Board Questions and Answers; and this has been true since the first edition was published in 1907. While a casual glance does not reveal that the book differs greatly from its predecessors, study shows it has been changed in many respects; for, as the authors state: "In the eleven years which have elapsed since the seventh edition of the work appeared, many important contributions have been made in the field of medicine which necessitated extensive revision of the book at the present time. . . . Much of the book has been rewritten, and important changes have been made in practically every chapter"; and a new section on psychiatry has been added.

So long as qualifying examinations for licensure are given young physicians, Goepp will remain the standby.

Douglas L. Cannon, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

EFFECTIVENESS OF "COLD CURES" UNPROVED, SAYS A. M. A. COUNCIL

The effectiveness of antihistaminic drugs in the prevention and treatment of colds has not been demonstrated by the reports on which a widespread promotion of "cold cures" is based, in the opinion of the Council on Pharmacy and Chemistry of the American Medical Association.

The Council, in a lengthy report made public in a recent issue of the Journal of the A. M. A., holds that "the evidence so far presented should be properly classified as the honest opinion of the investigators and not as fact." It concludes:

"Until a scientifically acceptable study is performed, the true effectiveness of the antihistaminic drugs in the control of the common cold cannot be evaluated."

As a guide for further investigations, the Council outlines a procedure which in its opinion "would be a true test of these agents in the treatment and prophylaxis of the common cold."

Meanwhile, the Council is standing upon a warning which it issued to the press December 2, 1949. The warning had pointed out that records show that many people who take these drugs become drowsy or even fall asleep while at work or in occasional cases even when driving cars or operating machinery.

Reporting on toxic reactions and even death from overdosage, the Council in its current report adds the further warning:

"With over-the-counter sale, careless and habitual use of the anti-histaminics may be expected and the medical profession should anticipate similar serious reactions. Basic research is indicated on the chronic toxicity of these agents in human subjects."

The Council reviews the results reported by four groups of investigators. These reports covered 2,357 patients, more than one half being studied by a single observer. Summarizing its analysis, the Council says:

"The diagnostic methods employed have not conclusively demonstrated that the condition treated was actually the common cold. Over half of the cases were investigated in

studies with inadequate controls or even without controls, and the interpretations of the results obtained are open to question."

It further says: "None of the studies established the diagnosis of a common cold beyond reasonable doubt. By exclusion of bacterial infection as a cause, one cannot arbitrarily assume that a virus is the agent responsible for the appearance of symptoms: Allergy may be involved.

"Acceptance of the patient's own diagnosis of a cold introduces many sources of error. The patient may have been mistaken in his belief that he was getting a cold; he may have been manifesting the symptoms of an allergy, or his 'cold' may have been aborted without the aid of any therapeutic agent. By physical examination alone, the cause of coryza certainly cannot be established as the virus of the common cold.

"Thus, in none of the studies is there clear-cut evidence of a verified diagnosis of the common cold."

The Council adds that the prophylactic study of one group, "while suggestive, requires verification because the series is small and contrary to the experience of allergists." It points out that "the antihistaminic agents apparently produce considerable subjective relief owing to inhibition of nasal discharge. Similar results may be obtained by use of ephedrine or atropine."

Commenting on the studies as a whole, the Council says:

"The acceptance of claims for therapeutic or prophylactic value of antihistaminic agents in the common cold requires demonstration that the condition treated in the studies was the common cold. Validity of diagnosis and cure must not be left to the discretion of patients, and the interpretation of results should be unquestionable.

"The evidence so far presented should be properly classified as the honest opinion of the investigators and not as fact. The common cold is such an economic hazard that this opinion must be checked by more basic research in the pathogenesis of the disease and the toxicity of the drugs employed, as well as by more authentic clinical evaluation."

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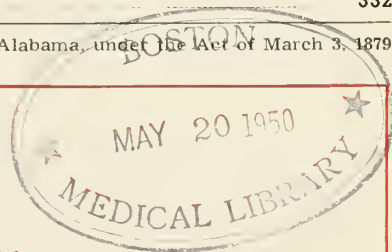
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THE IMPORTANCE OF NORMAL PATHWAYS OF TUMOR SPREAD

IN ESTABLISHING METHODS OF TREATMENT FOR UTERINE CANCER

A. N. Arneson, M. D.

St. Louis, Missouri

Cancer begins as a focal process, and for an indefinite time remains localized at its point of origin. The inevitable spread to other regions makes necessary the radical procedures performed in treatment. The most frequent point of origin for cancer of the cervix is at the junction of columnar and squamous epithelium. Spread from that location is by direct growth along pathways of least tissue resistance, and by dispersion chiefly through lymphatics.

Direct growth of cancer produces certain recognizable reactions in normal tissues. Invasion by tumor presents an abnormal situation, and resistance by the host is manifested by throwing up barriers of connective tissue. Fibroblastic response varies in different anatomical locations and in different individuals but is largely responsible for the induration noted clinically in malignant lesions. A solid mass of epithelial cells would, to be sure, present more firmness than normal tissues made resilient by virtue of lamina-

tions and more pliable supporting structures. Induration characteristic of cancer is due to local masses of tumor, as well as to tissue responses to invasion and to the ever present infection.

Considerable variation is to be expected in the behavior of different cervixes involved with cancer.^{1, 2} During the earlier stages of growth the tumor may follow a particular pattern of gross architecture not distinguishable in advanced forms in which the lesion presents a crater. In some instances there may be piling up of tumor cells on the surface producing sessile or partially pedunculated cauliflower-like masses with a minimum of invasion and disturbance within the cervix. There may be instances in which the cervix is expanded into a hard nodular form by virtue of growth into cervical tissue beneath a relatively intact mucous membrane. Endocervical varieties producing a "worm eaten" type of lesion would seem to fall into the more invasive group. Finally, there may be circumstances in which the tumor assumes a superficial character and is distributed rather thinly, but widely, over

Read at the Seminar on Cancer held at Birmingham, February 21-23, 1950, sponsored by the Association, the Medical College of Alabama and the Alabama Division of the American Cancer Society.

From the Department of Obstetrics and Gynecology, and the Edward Mallinckrodt Institute of Radiology, Washington University, School of Medicine, and the Barnard Free Skin and Cancer Hospital, St. Louis.

1. Arneson, A. N.: Cancer of the Cervix: Principles of Radiation Treatment, In: Progress in Gynecology. Meigs, J. V., and Sturgis, S. H. Grune and Stratton, New York, 1946.

2. Arneson, A. N.: Clinical Diagnosis of Carcinoma of the Cervix, Radiology 49: 400-402, 1947.

the mucous membrane. That type of cervical cancer is found less frequently.

Heyman³ has described a diagrammatic scheme for illustrating different forms of growth assumed by cervical cancer. By using a military analogy the stimulus producing cancer is pictured as a "landing force." Interactions within the cervix vary according to aggressive strength of the stimulus and the resistance of "fortifications" in the host's tissues. Assuming that strength of the "landing force" is weak in comparison with resistance of normal tissues, the result should be a tumor confined to a local "bridgehead" that is expanded only by building up reinforcements. In that instance the tumor becomes evertting in character, and may grow to considerable size before gross evidence of invasion takes place. In the presence of a reversal of those conditions, all local resistance is broken down and invasion into deeper structures occurs promptly. The cervix becomes expanded but the mucous membrane may remain relatively intact. In situations in which the opposing forces are of about equal strength neither of the above-described results would be expected to occur. The "landing force" (tumor) then becomes distributed rather

thinly over the surface of the cervix. Diagrammatic representations of the different forms of growth are shown in Figure I.

It is not unreasonable to believe that variations in gross forms assumed by cervical cancer might be associated with different consequences in the natural history of the disease. Virchow noted differences in prognosis in that tumors growing outward toward the observer present a more favorable clinical course than those growing inward and infiltrating normal tissues of the host. The invasive tumors may presumably be more apt to undergo early dispersion by virtue of malignant cells more promptly reaching points rich in lymphatics. Such biologic differences are extremely difficult to demonstrate clinically, however, because many other factors are involved, including the stage of advance to which the tumor has grown. Infiltrating tumors, due to their tendency to grow beneath an intact mucous membrane, are late to ulcerate and consequently do not produce clinical symptoms as promptly as do the more spongy and friable evertting types. As a result the invasive types of cervical cancer are usually rather well advanced clinically by the time diagnosis is established. That fact would, in part, explain the difference in end results shown in Table I for the evertting and infil-

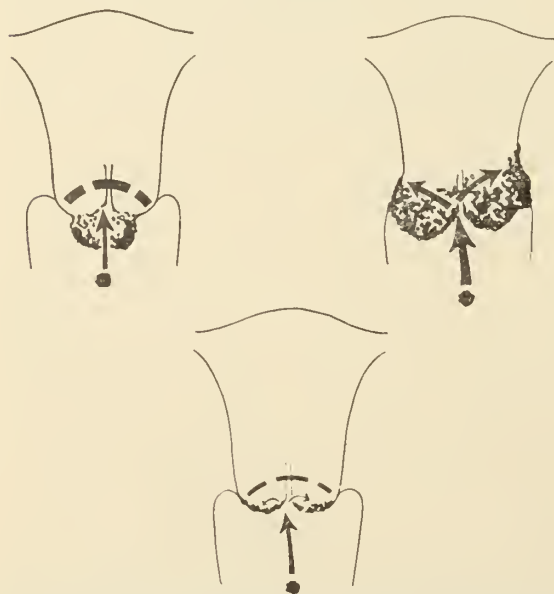


Fig. I. Diagrammatic representation of the different architectural forms of growth assumed by cervical cancer. Interactions between the stimulus producing cancer and normal tissues of the host are described by Heyman.

3. Heyman, J.: Personal communication.

CANCER OF CERVIX UTERI - 1935 - 1942

Primary Cases - Absolute Statistics

224 Consecutive Patients

173 Ward - 51 Private

Relation of gross appearance to end results

	Evert- ing	Infil- trating	Cra- tered	Un- classi- fied	Total
Number of Patients	85	74	57	8	224
Per cent Total	38	33	25	4	100
Five-year Survival	41	21	15	6	83
Per cent Survival	48	28	26		37

Table I. Percentage distribution and survival rates for the different gross forms of cervical cancer.

trating forms. It should be noted, however, that a difference in prognosis can be shown for the various gross types found within the same stage of clinical advance. Those data are given in Table II. The difference in prognosis is not marked in Stage I because a high percentage of all types survive. In the very advanced stages the survival is low for all varieties. There is to be found in Stage II, however, a definite difference in the five-year results for evertting and infil-

CANCER OF CERVIX UTERI - 1935 - 1942
Primary Cases - Absolute Statistics
224 Consecutive Patients
173 Ward - 51 Private

Clinical Group	Per cent	Patients	Gross Appearance					Per Cent
			Everting	Infiltrating	Cratered	Unclassified	Total	
I	15	Number	16	15	1	2	34	73.5
		5-year	11	12	1	1	25	
II	40	Number	38	26	20	5	89	54
		5-year	27	5	11	5	48	
III	32	Number	18	30	23	1	72	14
		5-year	3	4	3	0	10	
IV	13	Number	13	3	13	0	29	0
		5-year	0	0	0	0	0	
Total	100	Number	85	74	57	8	224	37
		5-year	41	21	15	6	83	

Table II. Distribution and survival of different gross forms of cervical cancer in the various stages of advance defined in the League of Nations classification.

trating forms. The better prognosis shown for everting types must be due to a lesser incidence of dispersion. For treatment by irradiation there is also the factor of tumor response. The production of ischemia and fibroblastic overgrowth in the normal supporting tissues of a tumor are as essential for regression as are degenerative changes produced in tumor cells. Due to the everting forms having a richer blood supply and a minimum of connective tissue there is greater opportunity in those types for irradiation to produce orderly changes in the tumor bed. The abundant connective tissue of infiltrating lesions is often associated with impairment of blood supply. They may be expected to show greater resistance to radiotherapy. When adequate data have been accumulated it may be possible to use the gross appearance of cervical cancer for the selection of patients best treated by surgery.

Mention should be made of cratered lesions in which loss of tissue hinders classification into everting or infiltrating forms. The tissue defect is usually incurred by slough following necrosis which is often typical of the more advanced tumors. Spontaneous degeneration will occur in the presence of severe ischemia, but a more frequent cause of necrosis is the presence of marked infection. Everting lesions are more commonly infected due to their friability and tendency toward ulceration. They should be the more common precursors of cratered

forms. As a matter of fact, the prognosis in cratered lesions, as measured by percentage survival in Stage II lesions, falls between values given for infiltrating and everting tumors. That indicates a natural history simulating the cauliflower variety, because infection alone will impair the end results to be expected. Infection affects adversely the response to irradiation. Tumor cells appear to become more resistant, and in the tumor bed the threshold to radiation necrosis is lowered. In clinical practice, therefore, every effort should be made to decrease infection present in greater or lesser degrees in all cancers.

Spread of cancer by direct growth outside the cervix may occur radially in all directions. Invasion follows paths of least resistance in laminations of tissue and will, for the most part, occur beneath intact mucous membranes. There may be considerable vaginal involvement that extends well beyond points obliterating the fornices without development of ulcerations. Extension anteriorly or posteriorly from the cervix encounters a thin fascial plane that inhibits invasion of the bladder and rectum. Direct involvement of those organs rarely occurs until late stages of the disease. So effective is the fascial barrier that Bonney⁴ considered a margin of uninvolved tissue only one twentieth of an inch in thickness consistent with operability.

Invasion that proceeds laterally from the cervix encounters a minimum of obstruction. In that direction tumor enters the ligament of Mackenrodt and in proceeding lateralward may move anteriorly or posteriorly. Extension directed postero-lateralward may encroach upon the lumen of the rectum. Annular involvement is rare, but suspicion of that occurrence is sometimes found after irradiation. That finding is due usually to the so-called "extrinsic rectal reaction" described by Tod,⁵ and is essentially an inflammatory development associated with supralethal effects of irradiation. The condition is made worse if mistaken for active tumor and treated with additional amounts

4. Bonney, V.: The Results in 500 Cases of Wertheim's Operation for Carcinoma of the Cervix, *J. Obst. & Gynec. Brit. Emp.* 48: 421-435, 1941.
5. Tod, M. C.: Optimum Dosage in the Treatment of Carcinoma of the Uterine Cervix by Radiation, *Brit. J. Radiol.* 14: 23-29, 1941.

of x-rays or radium. Sequelae of that order can be lessened if the primary irradiation produces a minimum of damage to normal tissues.

There is very little tendency for lateral progress of tumor to extend into the loose avascular structures in the upper portions of the broad ligament except by expansion of Mackenrodt's ligament, or the lower segment of the uterine body. The normal pathways for spread by direct growth are accessible to palpation through the vagina and through the rectum. For that reason it is possible to classify patients with cervical cancer into different groups representing various stages of clinical advance as measured by induration produced by the invading neoplasm. The margins of induration can be detected clinically with considerable accuracy, but such gross manifestations will not indicate precisely the outer limit of direct extension. Furthermore, there may be spread by dispersion not recognized clinically. A group of patients falling into the same stage of advance may be expected to show an average clinical result but the range of individual response may be wide. Obviously there are factors other than gross evidence of extent that affect prognosis. While those factors are related intimately to spread of tumor, they are determined largely by the natural history of cervical cancer. The tendency toward dispersion must vary in different instances. The classification of patients into clinical groups is important for estimating prognosis, determining method of treatment, and for comparing statistics.

Spread by dispersion occurs chiefly through lymphatics. The lymphatics of the uterus form a network that converges near the junction of the corpus with the cervix. From that plexus the main pathways pass lateralward, usually following the course of veins, to form anastomoses with the iliac nodes forming the so-called primary group. The position of those nodes is between and along the branches formed by bifurcation of the iliac vessels. They include the hypogastric lying near the apex of the bifurcation, the external iliac situated somewhat more distally along the medial and lateral aspects of the blood vessels of that name, and the obturator located near the obturator foramen. The parametrium is rich in lymphatics, and also contains small inconstant

nodes. Lymph nodes have also been found in the paracervical tissues. The most constant node in that region is the ureteral, which is located near the point that the uterine vessel crosses the ureter. A high incidence of dispersion is to be expected for cervical cancer due to the natural path for direct growth into paracervical and parametrial tissues rich in lymphatics and containing the principal lymph vessels of the uterus.

A number of secondary lymphatic pathways are also to be found. One of those follows the sacrouterine fold to anastomose with nodes along the sacrum which form part of the secondary group. Another constant set of lymphatics follows the course of ovarian vessels to anastomose with nodes along the common iliac vessels and the aorta. Lymph vessels also pass more superficially and anteriorly by following the course of the round ligaments. There are, of course, many intercommunicating branches and connections that permit cross dispersions making unpredictable any characteristic involvement of a single group of nodes. It is obvious, however, that the main lymphatics leading to the iliac nodes are the ones most commonly involved by cervical cancer. There is lesser opportunity for spread through ovarian lymphatics directly to the superior nodes of the secondary group, but that pathway is of considerable significance in dispersion of endometrial cancer.

To be considered also is the intimate relation of uterine lymphatics with those of the vagina. There are direct connections from one to the other. Vaginal lymphatics form a plexus near the introitus, particularly around the urethra. From that region connections pass upward over the symphysis to anastomose with superficial inguinal nodes. Metastases will not often follow that entire route but occasionally there is found a deposit of tumor near the urethral orifice. Occurrence of those dispersions is of a frequency that demands palpation and inspection of the urethra in all cases of cervical or endometrial cancer. There may also be metastases at any point along the vaginal tube that result from direct extensions, lymphatic dispersions, or contact implants.

Data upon lymphatic dispersion have been obtained from autopsy material and from surgical procedures, such as radical hyster-

ectomy and iliac lymphadenectomy. Information at hand is rather sketchy, and no data are yet available upon incidence of lymph node involvement in relation to the gross form of growth in the cervix. In a previous publication the experience of Tausig, Morton, and Bonney was cited in some detail.⁶ The primary, or iliac group of nodes shows involvement in approximately one third of cervical cancers that appear clinically to be limited to the cervix itself. That incidence may hold also for patients in whom the parametrial tissues are found microscopically to be without evidence of involvement. Among patients showing clinical evidence of parametrial spread, but of a degree consistent with operability, there is evidence that about one half have involvement of the primary nodes.

One of the most detailed studies of tumor spread is that performed by Henriksen.⁷ Data were taken from autopsies performed upon 356 cases of cervical cancer and 63 cases of endometrial cancer. The group included treated as well as untreated patients. An error on the order of 25 per cent was found in comparing classification of stage of advance made clinically with the findings at necropsy. Inflammation was often mistaken for extension. Evidence of ureteral obstruction was found in approximately 80 per cent of the cases. Uremia was the assigned cause of death in slightly more than half of the autopsies performed. Cachexia, intestinal obstruction, and peritonitis accounted for all of the remaining number, with the exception that about 7 per cent of the total died of causes unrelated to cancer.

Careful dissection of the pelvic lymph nodes was done in 41 cases of cervical cancer (15 were untreated) and in 10 cases of endometrial cancer. Among those with cancer of the cervix, examination of the parametrial regions revealed evidence of involvement in 77 per cent of the untreated group, but in only 33 per cent of the treated cases. That would indicate that irradiation had destroyed some local metastases. Distant metastases were more common in the treated group, which showed an incidence of 53 per

cent as compared with a value of 27 per cent among those not treated. That difference may possibly be the result of variation in tumor life. The immediate cause of death was assigned to local involvement in more than one half of the patients. Among treated cases only clinical failures came to autopsy. Two thirds of those patients showed no evidence of parametrial involvement. There must, therefore, have been a time factor that increased probability for distant metastases. The author did not consider too impressive the difference in distant metastases, however, because in the entire group of 356 cases the values were 37.8 per cent in the treated and 32.5 per cent in the untreated. In spite of that uniformity the importance of a time factor would seem to hold in further analysis of the entire group. A higher incidence of dispersion to the primary and to the secondary nodes was found in the treated cases. In comparison with the untreated group the respective values for the primary nodes were 58.5 per cent and 44.7 per cent, and for the secondary nodes the incidence was 70 per cent and 39 per cent. In the absence of treatment the continued local activity of the growth might be expected to result in a lesser average duration of life for the patient and for the tumor, with decrease in probability for dispersion. The question is, however, not solved upon the basis of time factor alone. The natural history of cervical cancer is not completely understood. It may be that the local effect of different tumors may so vary that some produce patient death more promptly than others. That quality may or may not be associated with tendency toward dispersion. Wide variation in duration of life for patients with persistent activity is well known. It is also significant that the very early pre-invasive lesions now being found by newer methods of diagnosis appear to show a peak age incidence approximately one decade younger than that established for cervical cancer. That would indicate that some tumors undergo slow insidious development for a long period before clinical evidence of the tumor becomes obvious.

In clinical practice it is important to know the average amount of dispersion to be expected for a given stage of clinical advance. Henriksen's data upon untreated cases included careful dissection of the pelvic lymph

6. Arneson, A. N.: Prognosis in Carcinoma of the Uterine Cervix, *J. Tennessee M. A.* 41: 195-205, 1948.

7. Henriksen, Erle: The Lymphatic Spread of Carcinoma of the Cervix and of the Body of the Uterus, *Am. J. Obst. & Gynec.* 58: 924-942, 1949.

nodes in 5 individuals classified as falling into the League of Nations Stage I. Of that number, 2 showed involvement of the paracervical nodes. Among 6 Stage II cases there was involvement of the parametrial nodes in 3. He found evidence indicating that one or both parametria and one or more primary nodes are usually involved before metastases extend to the secondary group. Those observations are in agreement with the data given by most authors. There is evidence that dispersion to the primary nodes will be present in about one third of patients presenting lesions that appear clinically to be limited to the cervix, and in about half of those with varying degrees of parametrial involvement not believed inconsistent with surgical treatment.⁶ It is obvious, therefore, that a survival rate in excess of two thirds must be attained in Stage I patients before there is evidence of control of regional dispersions. Following the same logic there must be survival of more than half of Stage II patients. It should be noted, however, that much of the data upon lymph node dispersion are taken from operable patients. The second stage of the League of Nations classification includes lesions well beyond that stage of advance. For the entire group the incidence of primary node involvement should be greater than 50 per cent.

Five-year end results reported for irradiation in Stage I patients are on the order of 70 per cent to 75 per cent. The values for a consecutive series of patients are given in Table II. The results reported for surgery are at about the same level. The similarity of survival rates indicate about equal effectiveness in control of the local tumor and of regional dispersions. Failure of either method to produce a greater percentage of five-year survivors must be partly due to communicating lymphatics resulting in more distant dispersions. It is not to be implied that a random choice can be made in the use of surgery or radiation. Emphasis should be made upon two points. In the first place the values given for surgical treatment are taken from radical procedures carefully performed. They will not hold for the ordinary hysterectomy. The second point is that patients treated surgically are usually selected from among young women in good health with thin abdomens and clean healthy

tumors. They represent the more favorable cases for any method of treatment. A careful analysis of the question will reveal an average superiority for irradiation.⁸

The spread of cervical cancer affects directly the treatment to be applied. A "theatre of operations" can be established to define the volume of tissue that must be treated adequately. Included in that zone will be the cervix, corpus and adnexa, as well as the paracervical and parametrial tissues with the primary group of nodes, and the upper one third of the vagina. Advance in knowledge of natural history of cervical cancer may make possible the selection of certain cases apt to be resistant to irradiation and better suited to surgical treatment.

The "theatre of operations" for endometrial cancer is essentially that described above, except that ovarian lymphatics communicating directly with the secondary group of nodes are more important. Henriksen has presented an equally detailed study upon dispersion of endometrial cancer. There is evidence that improvement in results can be attained by preoperative irradiation in operable cases, but hysterectomy remains of fundamental importance in treatment of the disease.⁹ It would seem, however, that too little attention has been given the importance of radical operation in performing the necessary surgical procedure.

Blood Test for Cancer—The Huggins-Miller-Jensen blood test for cancer does not appear suitable at present as a diagnostic test, in the opinion of two researchers from the Department of Experimental Pathology, Quincy (Mass.) City Hospital.

The test, based on albumin disturbance in cancer patients, was first reported about a year ago by Dr. Charles B. Huggins of the University of Chicago.

The diagnostic value of the procedure followed by Dr. Huggins and his co-workers was tested by Dr. Otakar J. Pollak and Adeline Leonard, B. S. Their report on test results from blood serums from 80 patients with proved malignant growth and on control serums from 170 patients appears in the March 25 Journal of the American Medical Association.

8. Arneson, A. N.: Radiation and Surgical Trends in the Treatment of Cancer of the Cervix Uteri, *Am. J. Roentgenol.* 59: 251-259, 1948.

9. Arneson, A. N.; Stanbro, Wm. W., and Nolan, James F.: The Use of Multiple Sources of Radium Within the Uterus in the Treatment of Endometrial Cancer, *Am. J. Obst. & Gynec.* 55: 64-75, 1948.

THE SURGICAL PROBLEM OF ADVANCED GASTRIC CANCER

ALEXANDER BRUNSCHWIG, M. D.

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New York City

The operations for carcinoma of the stomach have been gradually refined over the years since Billroth's first successful pylorotomy in 1881. Each year patients are subjected to gastrectomies which, it may be said, will yield increasing numbers of prolonged survivors. In general, one thinks of surgery for gastric cancer as envisaging cure. When the lesion is a small one, the hope for cure is greater than if the lesion is a large one. Experience is showing, however, that size of the lesion is not the only indicator of prognosis. It appears that the type of the lesion is of importance. A bulky polypoid tumor is of more favorable prognosis than a small ulceration surrounded by induration. Thus, size of a lesion alone should not deter the surgeon from excision. Not so long ago the presence of metastases in the liver was regarded as a major contraindication to excision of the primary growth and, if the latter produced obstruction, a gastrojejunostomy was done or even a jejunostomy was performed. In general, neither of these procedures afforded satisfaction and they could hardly have been expected to do this. At present some surgeons do not hesitate to excise a gastric neoplasm even though a few liver metastases may be present, since removing the disease from the stomach may and often does afford some degree of palliation.

With the extension of surgery to a broader scope in the attack of abdominal neoplasms, accumulating experience shows that a more radical view in regard to carcinoma of the stomach is perhaps justifiable and, of course, this is in connection essentially with palliative therapy, although, not too rarely, is it possible to achieve more than just a brief palliation.

In an attempt to secure palliation by radical surgery in advanced gastric cancer there will be a high incidence of failure. This is

to be expected but can not be utilized as an argument against such attempts. There is a widespread defeatist attitude in regard to radical surgery for advanced gastric cancer and this, I believe, is unfortunate because there is nothing else that can be offered these patients; and whereas some will secure benefits, most will not, but if nothing is done to any of the patients none will secure benefits.

It is difficult to convey in writing or by lecture the degree of palliation that may sometimes be achieved, because this degree may be very great yet the actual survival of the patient might not be very long. It is only the surgeon himself who has seen the patient preoperatively and then followed him postoperatively who can evaluate the entire picture of how much palliation was received.

To illustrate some of the more favorable palliative results of radical operation upon advanced cancer of the stomach, a few examples may be cited.

Case 1.: I. B., female, 55 years of age. Ten years previously she had had a partial gastrectomy for carcinoma in another institution. At the present admission the patient was hardly able to ingest food, a condition that had become progressively more acute in the past several weeks. At laparotomy the remaining upper third of the stomach, the body and tail of the pancreas, the spleen, transverse colon and loop of jejunum used for the previous gastrojejunostomy were excised. An esophagojejunostomy, two jejunostomies and end-to-end anastomosis of the colon were performed. Ingestion of food without discomfort was possible and the patient was discharged from the hospital in fair general condition. The operation was performed in the fall of 1948, and she survived to spend a contented Christmas holiday season with her family and take a mid-winter trip to Florida for a few weeks. She died the following May of extensive metastases. While the total survival time was not more than several months, existence was

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rendered much more agreeable and life was prolonged.

Case 2.: This was a 65 year old female weighing 116 pounds upon admission. Roentgenograms showed a large lesion of the mid-stomach. In April of 1949, a total gastrectomy, total omentectomy, splenectomy and resection of the body and tail of the pancreas was carried out because the carcinoma of the stomach was adherent to the body of the pancreas. Since discharge, three weeks after operation, the patient has done fairly well, is practically normally active, weighs 97 pounds and ten months after operation has no evidence of recurrences.

Case 3.: A male, 37 years old, received a radical gastrectomy for carcinoma in the lower portion of the stomach in April 1940. In December 1941, a second operation was performed because the patient was readmitted with intestinal obstruction. A large mass of recurrent gastric carcinoma was present in the omentum adjacent to the gastrojejunostomy and involving the transverse colon with constriction of the latter. A gravitational metastasis was present in the mesentery of the lower descending colon also causing constriction of a segment of this portion of the bowel. Two other gravitational metastases were present, one in the mid-jejunum and one in the mid-ileum each causing constriction of bowel. Half of the colon extending from hepatic flexure to junction of descending colon with sigmoid was resected and an end-to-end anastomosis of the colon performed, hepatic flexure to sigmoid. Two segments of small bowel were also resected to excise the metastases.

Several weeks after discharge he returned to work as a deckhand on a Great Lakes ship, rising from this position to captain of the vessel. He died in March 1944 after a few weeks illness due to rapid recurrence of metastases throughout the abdomen. During the three year survival period since the excision of his metastases he had a very active and profitable existence.

Case 4.: A seventy year old surgeon left his active practice to be operated upon for a lesion in the antrum. A radical gastrectomy was performed and there were two metastases in the right lobe of the liver. These were excised also. For one year following the operation he was normally active, performing numerous operations, traveling,

etc. He died after rather rapid development of multiple liver metastases. Excision of the two apparent metastases in the liver hardly slowed up the course of the disease but resection of the lesion in the stomach undoubtedly made the remaining span of life more comfortable. Indeed his activities were practically normal.

Involvement of the liver by direct extension does not necessarily indicate inoperability.

Case 5.: E. S., male, 58 years of age. At laparotomy a carcinoma on the lower lesser curvature of the stomach was found and there was a rather dense bundle of adhesions from the surface of the lesion to the under surface of the liver as if direct spread of the growth had occurred.

A radical gastrectomy was performed and the adherent portion of the under surface of the liver cut out to remove it en masse with the major portion of the stomach. A Polya type gastroenterostomy was done.

The patient remains well and normally active two years and two months after operation.

Not only can palliation be achieved in some instances of apparently advanced gastric cancer but actual five-year survivals are possible in some instances where the extent of the disease would seem to preclude this. Two examples are cited below:

Case 6.: N. A., 68 years of age. Laparotomy in May 1941 revealed a large carcinoma in the lower portion of the stomach rather densely adherent and presumably spread to the under surface of the left lobe of the liver. A radical gastrectomy was performed, together with excision of the entire left lobe of the liver (en masse with the carcinoma). The patient made an uneventful recovery and is living and well, normally active nine years after operation.

Case 7.: H. S., male, 50 years of age. Laparotomy performed in December 1941 revealed a large polypoid carcinoma of the fundus of the stomach with numerous lymph node metastases along the lesser and greater curvatures and in the omentum. A total gastrectomy and omentectomy with splenectomy was performed. The transection at the esophagogastric junction was not more than 1 cm. away from the gross limits of the tumor. Microscopic sections of the omen-

tum revealed numerous lymphatic channels engorged with tumor cells.

The patient has survived eight years and two months and remains well and is very active.

The stomach may be involved secondarily by neoplasm of the colon and this certainly does not preclude partial to extensive resection of the affected stomach; indeed this finding (of secondary involvement of the stomach) also does not necessarily bespeak of a poor prognosis.

The writer has performed excision of the transverse and right colon together with partial gastrectomy (lower half of stomach) in two patients who had large carcinomas of the transverse colon invading the lower portion of the stomach by direct extension. In one patient the body and tail of the pancreas were also resected. One patient survived five years and died of peritonitis secondary to perforation of a stoma ulcer. Necropsy revealed no evidence of carcinoma. The other patient, who also received partial

pancreatectomy, is living and well six years after operation.

The ideal treatment of malignant neoplastic disease would be prophylactic, after this some chemotherapeutic or biological control. Both prevention and medical treatment appear nowhere in sight at this time, and in the treatment of gastric cancer the surgeon is called upon to exert himself to great lengths in an attempt at control of the disease by radical excision—admittedly a crude form of therapy. Although present day results leave much to be desired, they are an improvement over several decades ago as regards the so-called operable lesions. Surgery has made great advances, especially in the supportive treatment of the surgical patient, and this permits of an extension of operability to the attack of so-called advanced gastric carcinomas. Palliation for these patients is well worth being envisaged because a degree of palliation is sometimes possible that no other form of treatment can afford; and in a very few instances, as I have tried to point out, five-year survivals can be achieved.

CARCINOMA OF THE PHARYNX AND LARYNX

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One should be in the possession of all information possible concerning cancer in order to treat it properly. Although we have learned much concerning its clinical manifestations, it still remains an unpredictable disease.

It is difficult to discuss incidence since one is dependent very largely on deaths for our vital statistics. Cancer is a reportable disease in but a few states. Therefore, patients who have been successfully treated for cancer usually are not included in incidence rates.

Cancer of the pharynx and larynx are relatively common. This does not mean that

there is an actual increase; instead, it is probably due to an increase in life expectancy and more people attain the cancer age.

Cancer of the Pharynx — In the nasopharynx, cancer is predominately a lymphoepithelioma or a transitional cell carcinoma. The common site is along the lateral wall in the region of the opening of the Eustachian tube. The local symptoms are few and too often are not recognized until the growth has either invaded the base of the skull involving cranial nerves or has metastasized to regional lymph nodes in the neck. Obstruction of the Eustachian tube may be an early symptom and therefore one should always examine the postnasal space of a patient whose complaints suggest tubal obstruction but whose ears are normal.

Diagnosis of carcinoma of the nasopharynx is difficult because the primary lesion often

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is small and cannot be visualized. In spite of this, one should resort to all diagnostic methods available in suspected cases. This should include posterior rhinoscopy, per-nasal inspection without and with a nasopharyngoscope, palpation, roentgenography and biopsy.

Cancer of the oropharynx and hypopharynx are more readily diagnosed since one can see these either by direct or indirect examination. The growth commonly is a squamous cell carcinoma. The symptoms usually are referable to the throat as a soreness or a sticking sensation or disturbances in swallowing, particularly when taking hot, cold, highly spiced or acid foods. Hypopharyngeal carcinoma is more often observed in women and involves the posterior aspect of the larynx and the pharyngeal wall. It has been associated with avitaminosis.

Pharyngeal carcinoma metastasizes to the deep cervical lymph nodes and along the pharyngeal chain. As a rule the effects of invasion of the carcinoma beyond the pharynx or the occurrence of regional metastases are the first evidences of the disease. As a rule the prognosis is not good.

Treatment is by irradiation or surgery. In the nasopharynx, irradiation offers some hope whereas surgery commonly is useless. In the oropharynx and hypopharynx, surgical treatment or irradiation may be employed. In the earlier cases, before metastasis has occurred, the prognosis is reasonably good.

Carcinoma of the Larynx—This is more common than pharyngeal carcinoma and also is more often observed in men than in women, the ratio being about 10 to one.

Prolonged irritation very probably is a predisposing etiologic factor. Keratosis, observed frequently in inveterate smokers of cigarettes, unquestionably is a factor, for in a large number that were observed over a period of years carcinoma was found to develop. Papilloma occurring as a single lesion always should be regarded with suspicion in adults as many of them too develop cancer.

Cancer is said to occur more often in the unskilled, and this suggested that factors responsible are associated with occupations. Strangely, however, there does not seem to be any greater increase in incidence among

those who inhale irritating gases, vapors or dust than in those who work in the open air.

The strange anatomic predilection for cancer to involve the anterior one-half of a vocal cord, the common origin of vocal nodules and polyps, suggests that laryngeal abuse may be a factor. This site of occurrence is indeed fortunate for the presence of a nodule on the edge or upper surface of a vocal cord invariably is productive of voice disturbances. In an analysis of over 500 patients with cancer of the larynx it was found that approximately 70 per cent occurred primarily on the anterior one-half of a vocal cord. This simply meant that approximately 70 per cent of all these patients with cancer of the larynx developed hoarseness as the earliest symptom and the disease should have been suspected and could have been easily recognized at that time had the larynx been examined by mirror laryngoscopy. The less common sites of involvement are the epiglottis and the subglottic larynx. These can be considered as "silent areas" since few symptoms commonly are manifested in the earlier stages. These patients, however, do complain of a sore throat, sticking sensation, frequent clearing of the throat or other symptoms that should immediately suggest the need for appropriate examinations.

Carcinoma of a vocal cord metastasizes late, as the lymphatics in the anterior larynx are scant. As a result, carcinoma of a vocal cord may attain considerable size before it finally extends beyond the larynx. In the posterior larynx, the subglottic area and the epiglottis, lymphatic drainage is richer and metastasis occurs earlier.

The diagnosis of laryngeal carcinoma should be a comparatively easy matter. If one will bear in mind that hoarseness is observed in about 70 per cent of all cases of carcinoma, and that it is an early symptom, then any adult male who has been hoarse for three or four weeks should be suspected as a possible case of carcinoma and should have his larynx examined. If this was routinely followed, few carcinomas would be overlooked.

Mirror laryngoscopy still remains the best single diagnostic method for laryngeal examination. As with all other diagnostic aids, a certain amount of practice is necessary to attain moderate proficiency but every interne and every resident should learn mirror

laryngoscopy before he embarks in practice. Any one who is not competent to carry out this procedure should refer his patient with hoarseness to one who can properly examine the larynx. The indiscriminate use of sprays, gargles or antibiotics in a case of persistent hoarseness without examination of the larynx not only is unscientific and unsound but savors of quackery.

While there are other lesions which might simulate cancer, a differential diagnosis can be made. Tuberculosis can be ruled out on the basis of a roentgen study of the chest and sputum studies. Syphilis can be excluded by appropriate serologic study. It is not necessary to carry out prolonged antiluetic treatment on the one hand or to place a patient on prolonged vocal rest on the other to determine if the laryngeal lesion is cancer, syphilis or tuberculosis. In all cases of doubt a biopsy should be made without delay.

In deciding the plan of treatment one must take into consideration a number of factors, including the location and extent of the carcinoma, the degree of malignancy and the condition of the patient. Both surgery and irradiation have been successfully employed, and the results in cancer of the larynx are better than those secured in carcinoma in any other structure of the body with the exception of the skin.

In our Clinic surgical treatment has been favored. In a minute lesion on a vocal cord one can carry out endolaryngeal surgery but these cases must be carefully selected, and one should be reasonably certain that a non-recurrence rate of practically 100 per cent can be secured before resorting to such a plan of therapy.

Carcinoma involving the anterior one-half of a vocal cord without extension to the anterior commissure and without fixation of the cord can be satisfactorily treated by laryngofissure. By this procedure one removes the carcinoma surrounded by an adequate margin of normal tissue in all directions. This procedure permits of breathing through the normal airway, and the patient commonly develops a serviceable voice. Laryngofissure should be employed only in lesions that are early and where one can be reasonably certain in at least 85 or 90 per cent of cases that the primary growth has been completely removed.

In lesions that cross the midline and involve the opposite cord, and in all other forms of carcinoma of the larynx, laryngectomy is indicated. In epiglottic lesions, removal of the entire hyoid bone and pre-epiglottic space, with dissection of the submental and submaxillary regions, usually is indicated. In extensive unilateral lesions one can carry out a prophylactic dissection of the corresponding lymph nodes of the neck where possible metastasis is suspected. In cases where there is definite evidence of metastasis, excellent results are being secured by doing an extensive block dissection and laryngectomy at the same sitting.

While these procedures appear radical it is our opinion that far better results will be secured by radical measures than by any form of palliation. While certain of the lesions involving the anterior commissure probably can be treated safely by laryngofissure, in a study of a large series of cases it was found that a majority of the recurrent lesions was observed in anterior commissure carcinoma. It is believed therefore that if one is more radical and does laryngectomy in questionable cases more patients will be alive at the end of five years.

In conclusion, those of us who are not engaged in the search for the cause of carcinoma should labor in the field of diagnosis, treatment and possible prevention. We must teach those who care for patients the early symptoms and signs of carcinoma. Patients must be taught to be on the lookout for any of the early symptoms and they must be impressed with the need of prompt investigation of the larynx or throat in the presence of voice changes or disturbances in swallowing. Cancer is curable if treated early, and the diagnosis can be made early only if the danger signals are heeded.

Smear Test in Cancer—Routine use of the smear test in gynecologic examinations of women for cancer is recommended by two Rochester, N. Y., doctors.

Writing in a recent issue of the *Journal of the American Medical Association*, Drs. Hannah L. Peters and William L. Madden of the University of Rochester School of Medicine and Dentistry describe a study of 200 women.

In this series of consecutive gynecologic patients examined for cancer, three cases of cancer were primarily discovered through use of the smear test, the doctors say.

RADIATION THERAPY OF LYMPHOMAS

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For the purpose of this discussion, I have reviewed all of the cases of lymphoma treated in the Department of Radiology at the Garfield Memorial Hospital in Washington, D. C. between 1933 through 1949.

One is faced at the outset with great difficulty in evaluating any form of treatment for this group of diseases. As an entity they provide many and sundry manifestations. On the other hand, they often exhibit features in common to the extent that they merge into one another in a manner utterly baffling to the clinician.

The various diseases comprising this group will be discussed as an entity, with appropriate consideration given at times to those features which are common to two or more diseases of this group.

ROENTGEN THERAPY OF LEUKEMIAS

Roentgen therapy of leukemias, in my experience, has always been guided by the following basic concepts which are not unique and are for the most part generally accepted:

1. The disease is incurable.
2. Longevity, from the onset of symptoms to death, is very little modified regardless of the method of treatment employed.
3. It is possible to prolong only the useful period of a patient's life once the diagnosis has been established. It is known that this obtains in the case of the chronic forms of leukemia only.

We must accept then that treatment is palliative in the sense that the patient can be made a more comfortable and useful citizen. The subject of acute leukemias can be readily disposed of from the standpoint of roentgen therapy.

Certainly roentgen therapy has contributed nothing to the longevity or comfort in this group of patients. This is in conformity with all reports in the literature.

Read at the Seminar on Cancer held at Birmingham, February 21-23, 1950, sponsored by the Association, the Medical College of Alabama and the Alabama Division of the American Cancer Society.

TABLE I
ROENTGEN THERAPY—ACUTE LEUKEMIA
1933 through 1949—11 cases
(Average)

Age	45 years
Duration of symptoms	8 weeks
Longevity from onset of symptoms	13 weeks

In the treatment of subacute and chronic leukemias, both my predecessor in the Department, the late Dr. E. A. Merritt, and I felt that they should only be treated when symptoms warranted. The indications in general were as follows:

1. Weakness, and/or fatigability.
2. Pain and discomfort from the effects of a large spleen or large lymph nodes.

Many authors feel that the blood count should be a determinate factor as a guide to additional therapy. I am not in entire agreement with this inasmuch as the total blood count level at which patients are asymptomatic varies considerably. For instance, one patient may have symptoms when the total count reaches 25,000 whereas another may be comfortable with a total count of 80,000. Actually, an increase in white count and decrease in hemoglobin are almost always associated with the symptoms above described. A relapse, however, should not be allowed to progress too far.

Most of the roentgen therapy has been given with apparatus in the mid-voltage range; i. e., 200 to 250 KvP with $\frac{1}{2}$ mm. copper filter added and a 50 cm. T. S. D. We have for the most part utilized the so-called "local treatment" in preference to the "spray" method of overall body irradiation.

In the myeloid group, irradiation is to the splenic area. In the lymphatic group, the involved glands are treated.

The first series of treatments in the myeloid group should be given exceedingly cautiously in an endeavor to test the tolerance of the patient to radiation. It should be conducted very much in the manner of a controlled experiment, using the same field size and daily dose for each patient. For this purpose, I have my own fixed concept from

which I deviate very little, if any, in the first series of treatments. A field size of 15 x 15 cm. and a daily dose of 50 "r" units, measured in air, at the level of the skin, is given daily. It has been found by experience that a maximum dosage in the first series of 250 to 300 "r" units can be tolerated almost invariably, given with this technic. The patient may then be allowed to forego treatment for a period of three weeks at which time a decision as to whether additional roentgen therapy is required can be made. This is, of course, based upon the response of the patient's symptoms to treatment, and upon the blood count level. I have not found it necessary to do daily or frequent blood counts with this technic, as patients, in my experience, tolerate this program very well. I repeat that it is important that the same field size and other physical factors be employed in every case in order that the splenic area will not be unduly irradiated by uncontrollable factors. This dosage and regimen may be repeated at any time, if and when the patient's symptoms and blood count make it necessary. It is often found that, as the disease becomes more advanced, larger daily doses and larger total doses in a single series may be tolerated and even necessary.

The chronic lymphatic leukemias are treated with the same physical factors but with a field size corresponding to the involved node-bearing areas requiring therapy. It is safe to administer 100 "r" units, measured in air daily, at the level of the skin. I do not think it wise to treat more than two node-bearing areas in one day, at least in the initial series of treatments. Treatments can easily be administered daily until each of the node-bearing areas receives a total dose of not more than 300 "r" units measured in air. Again, the response to this form of treatment can be evaluated in three weeks' time in terms of the patient's symptoms and blood count, and additional therapy given if necessary. It is imperative in the treatment of the chronic forms of leukemia, both myeloid and lymphatic, that the dosage be kept small in order to prevent severe irradiation nausea or sickness. It is also important to determine in the initial series the amount of radiation that the patient will tolerate and the amount necessary to produce a remission of the disease.

Tables II, III, IV and V are largely self-explanatory and indicate the quality and character of our material. It is noted that no attempt was made to differentiate the different types other than myeloid and lymphatic, nor did we set up any criteria to differentiate between subacute and chronic forms of the disease. Actually, a rather large number of this group of cases proved to be relatively fulminating forms of leukemia and could hardly be classed as having had a remission. I doubt that x-ray has much to offer in what I might call the marginal, acute forms of leukemia. It is often difficult to be certain whether we are dealing with that which will turn out to be a chronic leukemia, or a moderately fulminating so-called subacute form.

TABLE II
SUBACUTE AND CHRONIC MYELOID LEUKEMIA
1933 through 1949—35 Cases
Male—19; Female—16
(Averages)

Age	47 years
Duration of symptoms	10 months
Longevity after treatment	18 months
Total	28 months
5-year survivals (absolute)	31/1 (3%)

TABLE III
SUBACUTE AND CHRONIC MYELOID LEUKEMIA
1933 through 1949—35 Cases
(Averages)

Duration of 1st remission	6 mos. (27 cases)
Duration of 2nd remission	3½ mos. (17 cases)
Duration of 3rd remission	5 mos. (13 cases)
Duration of 4th remission	4½ mos. (6 cases)
Duration of 5th remission	3½ mos. (6 cases)

TABLE IV
SUBACUTE AND CHRONIC LYMPHATIC LEUKEMIA
1933 through 1949—24 Cases
Male—15; Female—9
(Averages)

Age	59 years
Duration of symptoms	10 months
Longevity after treatment	26 months
Total	36 months
5-year survivals (absolute)	17/2 (11%)

TABLE V
SUBACUTE AND CHRONIC LYMPHATIC LEUKEMIA
1933 through 1949—24 Cases
(Averages)

Duration of 1st remission	7 mos. (14 cases)
Duration of 2nd remission	8 mos. (11 cases)
Duration of 3rd remission	5½ mos. (9 cases)
Duration of 4th remission	5½ mos. (9 cases)
Duration of 5th remission	5½ mos. (9 cases)

Table VI is a composite chart which is largely self-explanatory and in which readily comparable statistical data are presented.

TABLE VI
LEUKEMIA

	Acute	Subacute and Chronic		Unclassified
		Lymphatic	Myeloid	
1933 through 1949 (75 cases)				
Total cases	11	24	35	5
No. deceased	11	16	25	5
No. untraced and living	0	8	10	0
No. cases prior to 1945	10	17	31	4
5-yr. survivals following:				
Treatment	0	2	1	0
Symptoms	0	6	1	0

It would seem appropriate to conclude the discussion of leukemias by freely quoting statements from various authors that seem to me exceedingly pertinent, and expressed in a manner in which I cannot improve.

Dowdy and Lawrence¹ state: "The object of the treatment is to secure the maximum symptomatic improvement and the minimum discomfort, with the smallest amount of irradiation. Any individual dose which produces nausea or a feeling of increased toxicity is likely an excessive dose. There is a noticeable variation in patients' tolerance and in the individual susceptibility of the disease to irradiation."

Craver² states: "All treatment known for leukemia today is at best merely palliative, but early diagnosis, close observation and the exercise of good judgment in applying available means of treatment, or in some instances, withholding specific treatment, depending upon the individual circumstances, may spell markedly improved palliation."

Sturgis³ states: "In treatment of the acute leukemias, roentgen therapy is useless, or in

fact harmful. Furthermore, the results are usually not satisfactory in patients with the subacute variety of the disease, nor is such therapy indicated in the subleukemic states." He further states that in chronic myelogenous leukemia total body irradiation is the most satisfactory form of treatment. However, when gross splenomegaly is present, localized treatment to the spleen is indicated. In the regulation of treatment, experience has shown that two mistakes are frequently made. First, the disease is permitted to relapse too far and, secondly, the dose of roentgen rays is excessive. He feels that patients with leukemia should be treated when the symptoms are present or when the total white count reaches 40,000 cells per cubic millimeter. In this he is in agreement with Murphy,⁴ who expressed the same opinion. Murphy, quoting Hoffman and Craver, states that the actual duration of efficient life after irradiation averages 2.1 years, and irradiation caused an average increase of about ten months in the duration of efficient life. This is a period of efficiency and usefulness that the patient could not otherwise enjoy. Sturgis³ also states: "Roentgen therapy in the average case of chronic leukemia adds an average of about six months to the patient's life and that when combined with blood transfusions and antibiotic therapy to combat infection, the symptoms may be controlled for approximately 80 to 90 per cent of the remainder of his life."

I am in wholehearted agreement with the majority of these statements with the possible exception of the question of "spray" radiation. I believe the question of "spray" radiation vs. so-called "local treatment" is largely a matter of taste. I know that much more care and precision and capacity for doing harm are present when "spray" radiation is used as compared with the localized type. Everything else being equal, I would prefer the latter method of treatment. I also do not think it necessary to institute treatment in all cases when the blood count reaches 40,000 cells per cubic millimeter, inasmuch as previously stated many patients are perfectly asymptomatic with blood counts at a higher level.

1. Dowdy, Andrew H., and Lawrence, John S.: The Treatment of Chronic Leukemia by Small Dose Roentgen Ray Technic, J. A. M. A. 116: 2827-2831 (June 28) 1941.

2. Craver, Lloyd F.: Lymphomas and Leukemias, Bull. New York Acad. Med. 2nd series, 23: No. 2, 79-100 (February) 1947.

Craver, Lloyd F.: Lymphomas and Leukemias, J. A. M. A. 136: 242-249 (Jan. 20) 1948.

3. Sturgis, Cyrus C.: Recent Advances in Treatment of Hematologic Disorders, 141: 969-973 (Dec.) 1949.

4. Murphy, William P.: Results of Conservative Application of X-Ray Treatment in Chronic Leukemia, J. A. M. A. 115: 1156-1163 (Oct.) 1940.

GIANT FOLLICLE LYMPHOMA
(BRILL-SYMMERS DISEASE)

This disease, while known for quite some while to pathologists, has only in recent years begun to attract the attention of clinicians, and radiotherapists in particular. Simply stated, it is characterized histologically by numerical and dimensional hyperplasia of the lymph follicles (Rubenfeld⁵).

The main clinical feature of this disease is the presence of enlarged lymph nodes. My own experience and that of others would indicate that in many instances these nodes have been diagnosed microscopically as Hodgkin's disease, lymphosarcoma, lymphoma, or inflammatory tissue.

I wish to quote freely from Rubenfeld: "The hyperplastic lymph follicles may remain intact throughout the course of the disease or they may rupture and permit the escape of their cell components into the substance of the nodes. In the latter event, the disease, giant follicle lymphadenopathy, becomes transformed into polymorphous cell sarcoma. Symmers⁶ described this transformation in 1938. According to Cohen and Bergstrom, 'The ability of this disease to alter its morphology appears to be fundamental. Giant follicular lymphadenopathy is to be understood as a pattern of hyperplasia with potentialities for multiple differentiation, the end phase being unrecognizable in the original morphology.' On the other hand, it may remain unchanged throughout life (Symmers, Cohen and Bergstrom). 'It may undergo transformation into lymphosarcoma' (Baehr, Klemperer, and Rosenthal), or it may terminate in lymphoid leukemia, or become associated with histologic changes of Hodgkin's disease (Symmers). It may give rise to a reticulum cell sarcoma (Cohen & Bergstrom). Finally, it may undergo transformation into

the polymorphous cell sarcoma (Symmers)."

I wish to state briefly the facts of a case from my own records which is quite illustrative of the problem. Mrs. R. T., a white female, age 47, was first seen in mid-November 1947. Five months previously she noticed enlarged lymph nodes in the left axilla, one of which had recently been removed and reported histologically as a "lymphosarcoma." On my original examination I could find no other peripherally enlarged lymph nodes nor abdominal masses. The chest x-ray examination was entirely negative. I did not see the patient for another eighteen months, i. e., June 1949, at which time she came in stating that during the interim, on several occasions, glands had appeared in both the right and left supraclavicular areas and the epitroclear area. These were all studied histologically and reported as lymphosarcoma. The chest examination was entirely negative at that time.

In view of the fact that she had a history of long duration with maintenance of apparent good health, the slides were obtained from the hospital laboratory where they were originally reviewed, and studied by my colleague, Dr. Winship, who reported "giant follicular lymphoma." Thus in June 1949, two years after the first symptoms, and eighteen months after she was first seen, there were no palpable nodes or further evidence of disease. Two months later she developed enlarged epitroclear nodes, and a node in the cervical and supraclavicular areas on the right side. These node-bearing areas each received an estimated tumor dose of approximately 900 "r" units in four days time, which provoked complete involution by the end of three weeks.

The nodes in the disease are quite radiosensitive, as indicated above. Possibilities of control by roentgen therapy are indicated by the following reports from the literature.

TABLE VII
ROENTGENTHERAPY
GIANT FOLLICULAR LYMPHOMA
5 YR. SURVIVALS

	No. of Cases	5 Yr. Survivals Following Treatment
Rubenfeld—1947	7	4 { 14—10 7—5
Uhlmann—1946 (10 cases)	22	6 { 6—5—5 5—9—5
Prior to 1942		

5. Rubenfeld, Sidney: Roentgenologic Treatment of Lymph Nodes and Spleen in Brill-Symmers Disease, J. A. M. A. 137: 849-853 (July) 1948.

6. Symmers, D.: Giant Follicular Lymphadenopathy With or Without Splenomegaly, Arch. Path. 26: 1092 (Sept.) 1938.

Symmers, D.: Clinical Significance of the Pathologic Changes in Giant Follicular Lymphadenopathy, *ibid.* 34: 385 (Aug.) 1942.

Symmers, D.: Clinical Significance of the Deeper Anatomic Changes in Lymphoid Diseases, Arch. Int. Med. 74: 163 (Sept.) 1944.

Rubinfeld⁵ stated that a total air dose of between 600 to 1000 "r" units caused recession of the enlarged lymph nodes and spleen in giant follicular lymphadenopathy, but that nodes that had undergone transformation into polymorphous cell sarcoma usually required higher doses to the extent of 2000 to 3000 "r" units. Uhlmann⁷ is of the opinion that the dosages should be in terms of the ordinary cancericidal dose; i. e., between 4000 to 5000 "r" units. I do not have sufficient information from my own records to warrant a statement as to the total dosage necessary to produce a permanent involution of the disease. I do believe, however, that a total tumor dose in the region between 3000 and 4000 "r" units, in a period of not more than thirty days time, would be sufficient to provoke permanent involution of the disease in those cases where it is at all possible.

When one is presented with a proven case of leukemia, Hodgkin's disease, or lymphosarcoma, with a history of adenopathy of long duration, the probability of a preexisting giant follicle lymphoma must be entertained. It is not infrequent that a lymph node, with clinical evidence of neoplastic disease, will be studied histologically and reported as "inflammatory tissue." The possibility of this disease, i. e., giant follicular lymphoma, must again be kept in mind. Craver² has this to say regarding selection of lymph nodes for biopsy: "In lymphosarcoma and Hodgkin's disease, the diagnosis must be based, if possible, on biopsy of a representative node. Too often, because of cosmetic reasons, a small outlying node is selected and fails to yield a satisfactory specimen. With experience one learns to be able to select whichever small peripheral and easily accessible nodes are likely to be significant, judging them by their change to globular or nodular shape, and firm to hard consistency, but without such experience, it is better to select, if possible, a node which has been enlarged longer and is a part of a group of nodes, so that it seems likely to be more certain of being representative of the disease process one is trying to identify.

7. Uhlmann, Erich M.: The Significance of Giant Follicular Lymphadenopathy, *Radiology*, 50: 147-156 (Feb.) 1948.

HODGKIN'S DISEASE

Certain facts regarding Hodgkin's disease are exceedingly pertinent as regards roentgen therapy and should be stated categorically.

1. In many instances, the disease is of unicentric origin; i. e., it arises in a solitary focus. This is supported by Craver. He reported five cases of Hodgkin's disease from the Memorial Hospital in which treatment was surgical removal of the only nodal mass found, followed by local roentgen irradiation, with subsequent survival of from five to ten years. He quotes a report by Baker and Mann of England of two apparent cures of unilateral cervical Hodgkin's disease following surgical extirpation of all diseased tissue and postoperative roentgen therapy, the cures lasting ten and twelve years, respectively. He also found nine cases in the literature of gastric Hodgkin's disease treated by partial gastric resection. One patient was well for four years and one for five years, and also an additional case of resection of Hodgkin's disease of the ileum that was free from evidence of the disease for five years before recurrence was found in the small intestines. Admittedly, most of the cases when first seen have multiple sites of involved nodes apparent. In my own material 70 per cent of the cases did this. One can only presume in these instances that the disease was either of multicentric origin or that dissemination from the primary site was so rapid as to add up to the same problem.

2. Hodgkin's disease is commonly thought of as being primarily manifest in the more superficial nodes; i. e., the neck, axilla and inguinal regions, whereas Jackson and Parker,⁸ in a study of extensive autopsy material, found mediastinal, para-aortic, cervical, retroperitoneal and mesenteric nodes in a vast majority of Hodgkin's granuloma coming to autopsy. The most common site was in the mediastinal nodes (55 cases out of 59). In 27 autopsy cases of Hodgkin's sarcoma, they found retroperitoneal lymph nodes in 21 cases. The mediastinal nodes were involved in 14 and the mesenteric nodes in 12. Their material, and this evidence is also supported by Craver, directs our attention to the fact that almost every

8. Jackson, Henry, Jr., and Parker, Frederic, Jr.: Hodgkin's Disease, II Pathology, *New England J. Med.* 231: 35-44, (July) 1944.

type of tissue and organ in the body can be involved in the disease process. This is undoubtedly the reason why many cases of Hodgkin's disease, particularly in the later stages, get a much more pronounced clinical improvement as a result of nitrogen mustard therapy than they do from roentgen therapy directed to the obvious peripherally involved nodes.

Bearing these facts in mind, it would seem at least theoretically possible to provoke complete sterilization and even cure, providing treatment is sufficiently aggressive and the diagnosis established early before dissemination has taken place. Secondly, it would seem logical to assume that the more frequent sites of disseminated disease should be kept in mind when treatment is directed to a case that has obvious multiple sites of peripheral node involvement.

I would like to review briefly a case record from my own files that illustrates many of the problems and possibilities in the treatment of the disease. Mr. T. P., a white male, age 17, in August 1944 consulted our Department with the story of a right supraclavicular node that had been present for one year. The node was removed, examined histologically and reported as Hodgkin's disease. Physical examination disclosed several small, discrete nodes on the right side of his neck, with a large conglomerate mass of lymph nodes in the cervical and supraclavicular areas on the left and associated bilateral axillary adenopathy. The enlarged lymph nodes in the left neck received a tumor dose of approximately 1200 "r" units in thirty days time, and did not undergo complete involution. The other nodes underwent involution with smaller doses. Two months after the patient was first seen, the chest x-ray examination disclosed mediastinal adenopathy, with parenchymal infiltration, which was thought to be disseminated disease into this area. A tumor dose of approximately 900 "r" units was given in thirteen days time but failed to provoke involution of this process. It did remain relatively stationary, however, and nine months later an additional tumor dose of approximately 2000 "r" units was delivered into the mediastinal area which provoked slow involution of the process. Four years after the diagnosis was established, the patient developed numbness and tingling in both hands due to

what proved to be a destructive process involving the 2nd and 3rd dorsal vertebrae, which, in view of the patient's history, was attributable to osseous Hodgkin's disease. In six days time he was given a tumor dose of approximately 800 "r" units, with no improvement in his symptoms. It was found necessary to deliver a tumor dose of approximately 2000 "r" units additional in the next two months time to provoke subjective improvement. This was obtained and now, eighteen months later, he is having no further signs or symptoms referable to the disease process in his spine, and no symptoms or signs indicative of residual pathology in the lung or mediastinum, over four years after treatment. However, he has developed recurrent nodes in the axillary and cervical areas at various times which have required small palliative doses of roentgen therapy. It has been found that a tumor dose of approximately 600 "r" units will provoke temporary disappearance of these lesions.

It is apparent, in reviewing this case, that a relatively permanent involution of the disease process has been obtained with the delivery of 2000 "r" units into the tumor in about three months time. It is also apparent that dosages smaller than this produced only temporary involution and retreatment was necessary. Another important fact which I did not mention in the report is that he has had several nodes in the axilla and supraclavicular areas that I have kept under observation, without treatment, for a period of from six to eight months. During that time they have shown little or no modification, either involution or acceleration of growth.

Admittedly, this is a rather dramatic case but illustrates several points well worth remembering as regards the disease.

1. Initial treatment, if sufficiently aggressive, is capable of producing a relatively permanent involution. In this particular case, it was shown to be a tumor dose of approximately 2000 "r" units. Several other cases in my own material tend to substantiate this tumor dosage level as one likely to produce a rather high incidence of permanent involution.

2. Aggressive treatment of this type, when possible to local node-bearing areas without producing too much of an untoward reaction, may add to the total longevity of the

patient. One can at least assume that the possibilities of local recurrence in a site treated with this dosage is extremely unlikely. I will add further that it is in most instances possible to deliver a tumor dose of this size without undue reaction on normal tissue providing the treatments are fractionated over a relatively long period of time with small daily doses. I have the impression that lymphomas differ from cancer in that radioresistance on the part of the tumor is much slower to develop in lymphomas than in true cancer.

A third fact in this case that is well worth remembering is the problem of handling recurrent nodes when the disease is widely disseminated. I do not think it necessary to treat immediately all small nodes as soon as they become evident, as demonstrated in the above case and in many others in my own experience. These nodes are often times quite innocuous and will remain unchanged over a period of months without treatment. Nodes of a recurrent character should only be treated when it is evident that they are producing generalized or local symptoms due to their actual bulk.

Tables VIII, IX and X indicate the quality and character of my own material. The conclusions to be drawn are self evident.

TABLE VIII
ROENTGEN THERAPY—HODGKIN'S DISEASE
1933 through 1949—(27 cases)

Males—63%	Negro—10%
Average age	39 years
Average duration of symptoms	13 months
Multiple sites apparent	70%
Single site apparent.....	30%

TABLE IX
ROENTGEN THERAPY—HODGKIN'S DISEASE
1933 through 1949—(27 cases)

	% Cases	Average Tumor Dose
Complete primary involution (temporary)	33%	450 "r"
Complete involution (permanent)	7%	2500 "r"

TABLE X
ROENTGEN THERAPY—HODGKIN'S DISEASE
Treated Prior to 1945—(20 Cases)

Living and untraced—3	Dead—17
Average	{ Origin of treatment 23 months Origin of symptoms 40 months
Longevity	
Absolute	{ Origin of treatment 15%
5-Year	
Survival	
	{ Origin of symptoms 50%

LYMPHOSARCOMAS

Most of the general statements previously made regarding Hodgkin's disease apply to lymphosarcomas also. Evidence of a unicentric origin is supported by Sugarbaker and Craver⁹ who reported a higher survival rate when the primary site seemed to be in the head and neck. del Regato,¹⁰ reporting on the curability of lymphosarcoma of the tonsil by roentgen therapy, stated that 15 out of 37 cases treated in Coutard's service in Paris between 1921 to 1933 remained alive from six to fourteen years without signs of recurrence or metastasis. This represents a 40 per cent, five-year survival rate. Stout¹¹ is responsible for several pertinent statements which are worthy of note.

"Some cases of lymphosarcoma have a long natural duration. It would seem that the five-year period of observation is not long enough to decide whether or not permanent cures have been effected." He believes that clinically a majority of lymphosarcomas seem to have a focal origin. Craver is not nearly so emphatic on that point. Stout points out that all the ten-year survivors in his series had either a single primary focus or, at most, two contiguous anatomic areas involved when treatment was begun. Further support of the possibility of a unicentric origin is given by Stout, in which seven of his cases of long survival were treated with surgical excision alone. Stout points out that the favorable results have been obtained almost always while the neoplasm was still relatively localized. It follows that if more cases are recognized and treated in this early stage the number of cases of long survival will be increased. This can only be done by means of earlier biopsy of enlarged nodes and suspicious tumors in the known areas of involvement. He points out that if the neoplasm manifests itself before the age of 20 the chances of long survival are minute, and they are greatest if the patient has passed

9. Sugarbaker, E. D., and Craver, L. F.: Lymphosarcoma: A Study of 196 Cases with Biopsy, J. A. M. A. 115: 17-23 (July 6); 112-117 (July 13) 1940.

10. del Regato, Juan: Roentgentherapy of Lymphosarcomas of the Tonsil, Radiation Therapy, Tumor Inst., Seattle, (No. 2), pp. 67-76 (May) '41.

11. Stout, Arthur Purdy: Is Lymphosarcoma Curable? J. A. M. A. 118: 968-970 (March 21) 1942.

his 40th year. Cases associated with leukemia are always fatal. Catlin¹² analyzed 50 determinate cases of lymphosarcoma of the head and neck treated at Memorial Hospital and found a five-year survival rate of 52 per cent. Stout reported a 23 per cent five-year survival, and Craver a 26 per cent five-year survival in all cases of lymphosarcoma treated in their respective institutions.

For the purpose of reviewing my own material, I have grouped all cases that have been reported histologically as lymphosarcoma, reticulum cell sarcoma and by the general loose term of lymphoma or lymphoblastoma into one group. While there are some minor differences to the response to radiation in the various categories, and in the survival rate, the general pattern of all the categories is surprisingly similar. It is contemplated that a very careful review of the histology in this entire group will be made. It is anticipated that this study will provoke some changes in the diagnoses. It seems feasible for the purpose of this discussion to put these three groups into one category. The following brief case report from my own records serves to illustrate one of the most satisfying possibilities in the treatment of this category of lymphoma.

Mrs. G. N., female, white, age 22, was first seen in late July 1939 with the story of left cervical adenopathy of considerable size that had appeared one year previously. She received four or five small x-ray treatments following their appearance, which provoked partial involution. Growth recurred, however, and a biopsy was done and reported as "reticulum cell sarcoma." Our original examination disclosed a large tumor mass, measuring 12 x 15 cm., extending from the left mastoid to the chin and beyond the midline to the opposite side of the neck. The tumor extended from the mastoid to the clavicle. The skin of the whole area was red, evidencing as associated inflammatory process. No other adenopathy was present. This was obviously an exceedingly large tumor, and during the next fifty-two days the patient received a tumor dose of approximately 3500 "r" units which provoked an immediate and permanent involution of this

12. Catlin, D.: Lymphosarcoma of the Head and Neck, *Am. J. Roentgenol.* 59: 354-358 (March) 1948.

tumor. I have seen this patient within the month, ten and one-half years after treatment, and eleven and one-half years after the origin of her symptoms. She has no symptoms or signs referable to her former trouble. The sections have been carefully reviewed by several pathologists and all concur in the original diagnosis.

It is apparent that a tumor dose of approximately 3500 "r" units was sufficient to provoke a permanent involution in this particular case.

In reviewing the "cured" cases reported by del Regato of lymphosarcoma of the tonsil, I would estimate that all of these received a tumor dose of not less than this amount.

Tables XI, XII, and XIII indicate the quality and character of my material and are largely self explanatory.

TABLE XI LYMPHOSARCOMA 1933 through 1949—(54 cases)	
Males—54%	Negro—6%
Average age	53 years
Average duration of symptoms	9 months
Multiple sites apparent	80%
Single site apparent	20%

TABLE XII LYMPHOSARCOMA		
	% Cases	Average Tumor Dose
Complete primary involution (temporary)	23%	500 "r"
Complete involution (permanent)	32%	1400 "r"

TABLE XIII LYMPHOSARCOMA Treated prior to 1945—(40 cases)		
Living and untraced—6		Dead—34
Average	{ Origin of treatment	32 months
Longevity		40 months
Absolute	{ Origin of treatment	12%
5-Year		
Survival		21%

LYMPHOMA
HISTOLOGICALLY UNPROVEN

Included in my own material is a group of cases of clinical lymphoma in which histologic proof is not available. For a variety of reasons many of these cases were not biopsied. In others, the biopsy was unsatisfactory. The clinical course of the disease and response to roentgen therapy indicate that they fall into the lymphoma group.

The following case report is an illustrative example of many of the component features of this category:

A white female physician, age 40, was first treated in June of 1927. The following pertinent facts are abstracted from a careful history of the patient's own written story: The first symptoms that might be regarded as evidence of impaired health occurred at the age of 32, eight years prior to the time she was first treated. These symptoms developed during her second pregnancy, and consisted of rather marked exhaustion throughout the entire pregnancy, which disappeared after delivery. Following this, however, intermittent attacks characterized by great weakness and a "gone feeling" in the lower chest developed. They usually lasted from five to ten minutes and disappeared spontaneously. They continued until sometime after the first course of roentgen therapy, following which they disappeared. One month prior to the time she was first treated she felt well except for being tired all the time, a condition to which she stated she had become more or less unconsciously accustomed. One morning, on turning over in bed, she felt something move in her abdomen, and placing her hand there, felt a tumor mass in the right upper quadrant. In the ensuing weeks, this was made the subject of an exhaustive examination. She was seen by a number of physicians and consultants, without arriving at a conclusive diagnosis. All laboratory findings, specifically blood counts and hemoglobin, were normal. A presumptive diagnosis of lymphosarcoma or abdominal Hodgkin's disease was made and all the consultants felt that the condition was not a proper one for surgery. Roentgen therapy was recommended. The only positive physical finding was a tumor about 10 cm. in diameter in the midline, above and slightly to the right of the umbilicus. This was firm and fixed. Roentgen therapy directed to the tumor mass was instituted in June of 1927. She was treated by technics in vogue at that time, and the exact dose in terms of "r" units was not computed, but obviously in six weeks time she received quite an intensive dose of roentgen therapy, with prompt disappearance of the tumor and improvement in the patient's symptoms. Fourteen months later a small gland appeared in the left neck, which was also given

a small amount of roentgen therapy with prompt disappearance. During this interim the patient experienced excellent health. Three years after beginning of treatment, she developed acute appendicitis, for which an appendectomy was done with an uneventful recovery.

Following this, up until early in 1941 the patient engaged in a substantial practice of medicine in the District of Columbia, was very active, and enjoyed good health. She was admitted to the hospital, however, on July 29, 1941, fourteen years after the discovery of the original tumor. At that time the patient exhibited marked debility, moderate elevation of temperature, and leukocytosis with anorexia, some nausea and occasional vomiting. Chest x-ray examination disclosed definite infiltration in the base of both lungs which was thought to be related to the original disease. The spleen was markedly enlarged and there were bilateral, small, posterior, cervical glands. Progress was rapidly down hill with development of a marked leukopenia, and the patient died in approximately three weeks, slightly over 14 years after the abdominal mass was discovered and treated, and 22 years after what apparently were her first symptoms.

At autopsy, there could be found no evidence of the original tumor in the abdomen. Mediastinal nodes and pulmonary infiltration were found, however, which on microscopic section proved to be Hodgkin's disease.

This case illustrates the difficulties often encountered in obtaining microscopic substantiation of a clinical diagnosis. There can be no doubt as to the presence of a large tumor mass in the abdomen at the time the patient was originally treated. One can only speculate as to what the histologic features may have been at that time. It is quite possible that this may have been a giant follicular lymphoma, which, at a later date, underwent transition into typical Hodgkin's disease, which was the terminal feature.

My material includes 36 cases of microscopically unproven lymphoma which parallel quite closely in every respect the clinical data of the proven cases of Hodgkin's disease and lymphosarcoma. The only data of particular interest are those pertaining to response to roentgen therapy. Inasmuch as in this group of cases there was no histologic

verification, we were interested in closely observing the response to radiation therapy as a criteria for diagnosis. This response was probably more closely followed in this group of cases than the histologically proven group, and the following data are available for evaluation (Table XIV).

TABLE XIV
LYMPHOMAS
HISTOLOGICALLY UNPROVEN
1933 through 1949—(27 Cases)

	% Cases	Average Tumor Dose
Complete primary involution (temporary)	36%	1150 "r"
Complete involution (permanent)	16%	1750 "r"

From the preceding table it is apparent that even a tumor dose of 1150 "r" units gave a complete temporary regression in only 36 per cent of the cases, and a tumor dose of 1750 "r" units gave a relatively permanent regression in only 16 per cent of the cases.

TABLE XV
LYMPHOMA
1933 through 1949—(117 Cases)

	No. of Cases	% Male	Average Age	Symptom Duration	Multiple Site %
Hodgkin's	27	63%	39	13 mos.	70%
Lymphosarcoma	24	62%	51	8 mos.	80%
Reticulum Cell	16	44%	55	12 mos.	70%
Lymphoma	14	57%	54	6 mos.	90%
Clinical Lymphoma (No. micro.)	36	70%	48	8 mos.	72%
Average		59%	49 yrs.	11 + mos.	76%

TABLE XVI
ROENTGEN THERAPY—LYMPHOMA
1933 through 1949—(117 cases)

	Complete Involution (Temporary)		Complete Involution (Permanent)	
	% Cases	Tumor Dose	% Cases	Tumor Dose
Hodgkin's	33%	450 "r"	7%	2500 "r"
Lymphosarcoma	50%	450 "r"	25%	1200 "r"
Reticulum	6%	300 "r"	50%	1900 "r"
Lymphoma	14%	750 "r"	21%	1200 "r"
Lymphoma (No. micro.)	36%	1150 "r"	16%	1750 "r"
Average	28%	620 "r"	24%	1900 "r"

Tables XV and XVI are composite charts from which one can readily compare the various features of this group of diseases that have been discussed.

ROENTGEN THERAPY TECHNIC

I have endeavored to express the dosages in terms of tissue roentgens in order that the technic of treatment, regardless of what type of apparatus or physical factors are employed, may be instituted with this point in view. One salient difference between roentgen therapy of the lymphoma group and that of cancer, as I have stated previously, is that radioresistance within lymphomas builds up much more slowly. As a consequence, relatively large tumor doses can be built up in the lymphoma-bearing tissue with small daily dosages, longer protraction, and less damage to the normal structures.

I feel that roentgen therapy in the lymphoma group, exclusive of leukemias, should be guided by the following considerations:

When the disease is disseminated, and the prospects for long sustained palliation are poor, I should endeavor to give the tumor-bearing areas relatively small doses of roentgen therapy. A tumor dose of 900 to 1000 "r" units delivered in three or four days time is sufficient in the moderately advanced and advanced cases to produce satisfactory involution and palliation. This can be administered without producing any undue systemic reaction and/or undue skin reaction and can be repeated if and when necessary.

When the disease seems relatively localized or early, in such cases as primary lymphosarcoma of the nasopharynx or tonsil, or Hodgkin's disease confined to one or two contiguous areas, I feel that far more aggressive treatment is indicated, and tumor doses of the order of 3000 "r" to 4000 "r" units should be given in protracted fractionated doses in approximately five to six weeks time.

It is indeed unfortunate that there is such a paucity of information in the literature regarding the minimal tumor dose necessary to effect a complete, permanent involution in this group of diseases.

SUMMARY

Certain clinical facts regarding lymphomas, particularly as they relate to roentgen therapy, have been presented. Some of these statements reflect my own philosophy which may not be in entire accord with other authors. There is actually little new that can be added regarding the disease from the stand-

point of roentgen therapy. The protean manifestations of this group of diseases, together with the many variables in their natural history, render dogmatic statements as being open to question. It is quite apparent that many pertinent considerations must deal in generalizations.

In conclusion, I would like to quote again from Craver, who, in a discussion on the difficulties often encountered in fitting the various types of lymphoma into specific categories, cites the following case: "An unusual example of the confusing overlappings in this field is afforded by a patient now under treatment, who, in the course of about six years, has provided our pathology service

with lymph nodes suggesting at one time tuberculosis, another time follicular lymphoma, then specimens from partial gastric resection and liver biopsy, diagnosed sarcoidosis, and most recently another lymph node biopsy that showed "Hodgkin's disease."

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2. Slaughter, D. P., and Craver, L. F.: Hodgkin's Disease: Five-Year Survival Rate; Value of Early Surgical Treatment; Notes on Four Cases of Long Duration, *Am. J. Roentgenol.* 47: 596-606 (April) '42.

CANCER OF THE COLON AND RECTUM

FACTORS INFLUENCING GREATER CURABILITY

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The incidence of cancer of the colon and rectum, according to vital statistics, is on the increase. Since 1944 malignancy of the large bowel and rectum has exceeded cancer of the stomach as the most frequent cause of death from cancer. In 1947 there were 190,000 deaths in the United States from cancer and other malignant tumors. This represents more deaths in one year than occurred in the United States Army in action during World War II. Approximately 35,000 (18 per cent) of these deaths were due to cancer of the colon and rectum.

It is usually postulated that this increased incidence of cancer is due to several factors: 1. Increased life expectancy has placed more people in the optimum age group: 2. Better diagnostic procedures are being utilized more widely. 3. Finally, there is a greater awareness for the disease entity on the part of physicians and the laity and hitherto un-

detected lesions are now being discovered and recorded.

In spite of the relative increase in the incidence of cancer in this portion of the gastrointestinal tract, these are still appalling figures that confront every cancer symposium, with the stark question of what more can we do? First, we must be cognizant of the fact that considerable progress has been made by the cooperative efforts of all groups interested in alerting the laity to earlier detection and in the definitive treatment of this disease. Treatment is making an impress, as Wangenstein¹ has pointed out, otherwise the tables of incidence and mortality would be strictly comparable.

The incidence of cancer of the rectum and anus is approximately 15 per 100,000 of population, while the death rate is seven per 100,000 of population. The incidence of cancer of the colon and small intestine is variously reported from 20 to 30 per 100,000 of population, while the death rate is 15 per 100,000

A part of the Seminar on Cancer at the Medical College of Alabama, Birmingham, February 21-23, 1950, sponsored by the College, the Association and the Alabama Division of the American Cancer Society.

1. Wangenstein, O. H.: Cancer of the Colon and Rectum, *Wisconsin M. J.* 48: 591, 1949.

population. Roughly, 30 to 40 per cent of those afflicted are now being cured. But we know that approximately 75 per cent of those persons afflicted with this disease could be assured of five-year cures if they received treatment earlier; that is, before the regional lymph nodes become involved. Unfortunately, cancer of the colon and rectum is occasionally an insidious process where advanced lesions are encountered in some instances after only a short period of symptoms, or the lesion may be entirely silent. These are unfortunate situations that make all of us quake, and they probably will not be entirely averted until a specific diagnostic screening test can be applied to the whole populace. However, many of these lesions, as well as early, premalignant and malignant growths, are now being discovered by the numerous cancer detection centers and by conscientious private physicians.

It is our feeling that the hope of achieving greater curability with this increasingly prevalent neoplasm rests, at the moment, chiefly upon the successful execution of a two-phased program: 1. Early detection must continue to be emphasized and reemphasized to both physicians and the laity. 2. Standards of minimal radicability in the treatment of cancer of the colon and rectum must be established for those treating this disease.

Incidence: Dukes² has called attention to the unequal sex distribution of cancer of the colon. In the proximal colon, cancer is found more frequently in the female, while in the distal colon it occurs with greater frequency in the male according to his studies. Collier³ reported the sex distribution of cancer of the colon to be equal in male and female. Bacon,⁴ in reviewing 1,995 cases of cancer of the rectum and sigmoid colon, reported three-fourths as many females with lesions in these segments as males.

The greatest incidence of malignant lesions of the large bowel and rectum, as reported in surgical series, is in the sixth dec-

ade. While relatively uncommon, cancer is by no means a rare disease in youth. One of us (H. E. B.)⁴ estimated in a series of 1,995 carcinomas of the colon and rectum that 5.4 per cent occurred in persons under 30 years of age. No age group is immune to this neoplasm but it does occur most frequently between the ages of 50 and 70 years of life (Table I).

TABLE I
AGE INCIDENCE

Age	No. of Cases
17	1
21-30	29
31-40	88
41-50	180
51-60	325
61-70	223
71-80	128
81-85	9
Total	983
Youngest	17
Oldest	85

Distribution of Lesions: Buie and Jackman have stated that 50 per cent of all carcinomas of the colon and rectum are within reach of an examining finger in the rectum and that 80 per cent of colonic and rectal lesions could be visualized with a sigmoidoscope.

Figure I records the incidence of malignant lesions in the various segments of the large bowel as reported by Pemberton and Dixon⁵ in 3,542 patients. Seventy-seven per cent of the malignancies in this series occurred in the rectum and sigmoid colon. The incidence of cecal lesions was 5.95 per cent, while the remaining segments harbored 16.99 per cent of the malignancies. The authors' series (Table II) represents predominately distal colon and rectal lesions.

TABLE II
LOCATION OF CARCINOMA

Cecum	5
Transverse colon	4
Splenic flexure	3
Descending colon	9
Sigmoid	143
Rectosigmoid	278
Rectum	515
Anal canal	26
Total	983

5. Pemberton, J., and Dixon, C. F.: Malignancy of the Thyroid and Colon, Surg., Gynec. and Obst. 58: 462, 1934.

2. Dukes, C. D.: Cancer of the Rectum: An Analysis of 1000 Cases, J. Path. and Bact. 50: 527, 1940.

3. Collier, F. A., and Berry, R. L.: Cancer of the Colon, J. A. M. A. 135: 1061, 1947.

4. Bacon, H. E.: Anus, Rectum and Sigmoid Colon. 3rd ed. J. B. Lippincott Co., Philadelphia, 1949, p. 603.

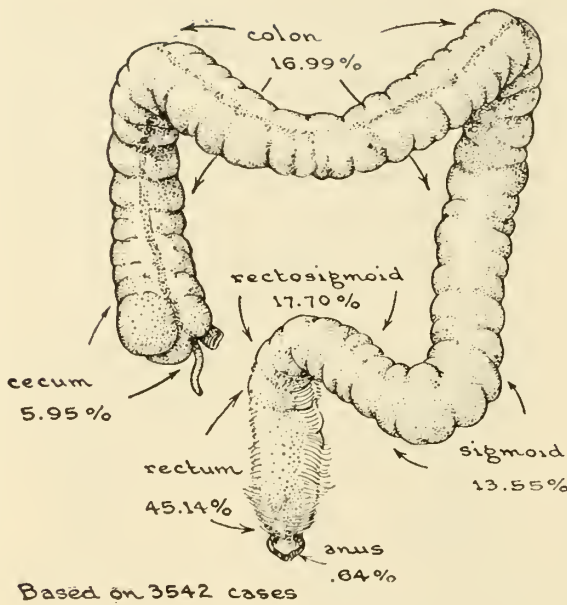


Fig. I

Type of Tumor: Malignant lesions of the colon and rectum are predominately adenocarcinoma. Sarcoma, while relatively uncommon, ranks next in frequency. Anal canal lesions are most frequently squamous cell carcinomas, but adenocarcinoma and basal cell carcinoma may occur in this location. Table III indicates the type of lesions encountered in our series.

TABLE III
HISTOLOGIC TYPE OF TUMOR

	No. of Cases	Per-centage
Adenocarcinoma	947	96.2
Epithelioma (a) Squamous cell	24	26
(b) Basal cell	2	
Malignant melanoma	2	10
Fibrosarcoma	3	
Leiomyosarcoma	2	1
Lymphosarcoma	1	
Neurogenic sarcoma	1	1
Carcinoid	1	
Total	983	

Histologic grading was reported according to Broder's classification in 884 instances in our series of 983 malignant lesions of the colon and rectum. This excludes the ten malignancies other than carcinoma but includes the 26 cases of epithelioma.

TABLE IV
HISTOLOGIC GRADING (BRODER'S)

Grade	No. Cases	Percentage
I	120	13.6
II	466	52.7
III	233	26.4
IV	65	7.3
Not graded	99	
Total	983	100.0

Multiple Malignancy: Numerous articles in the literature during the past 20 years have emphasized the increasing incidence of multiple primary malignancies in all portions of the body. Slaughter⁶ has shown in an analysis of 1,868 cases that there is a striking tendency for them to occur in the same or paired organs. Multiple primary neoplasms occur most frequently in the skin or in combination with the skin. The next most commonly involved system is the gastrointestinal tract. Here the colon leads the other segments with the highest incidence of multiple primary lesions. Multiple primary neoplasms were ascertained in 49 of 800 patients in our series, an incidence of 6.1 per cent.⁴

It has been recognized for some time that adenomatous polyps of the colon and rectum occur more frequently in cases with carcinoma of these segments of bowel than in those individuals who do not have malignancy. Mayo and Schlieke⁷ reported that adenomas were present in 114 of 334 patients (34.1 per cent) with carcinoma of the colon or rectum who subsequently came to autopsy. Definite malignant changes were present in 16 cases, or 11.4 per cent. For comparison, they reported the incidence of adenomas of the colon and rectum to be 16 per cent in 100 consecutive routine autopsies where the cause of death was other than carcinoma of the large bowel. Bacon and Broad⁸ reported adenomas to be present in the colon and rectum of 31.2 per cent of 171 consecutive operative cases for carcinoma of these segments. Twenty per cent were found to be malignant. So it behooves all

6. Slaughter, D. P.: The Multiplicity of Origin of Malignant Tumors, Surg., Gynec. and Obst. 79: 89, 1944.

7. Mayo, C. W., and Schlieke, C. A.: Carcinoma of the Colon and Rectum, Surg., Gynec. and Obst. 74: 83, 1942.

8. Bacon, H. E., and Broad, G. G.: Pathogenesis of Adenomatous Polyps in Relation to Malignancy of Large Bowel, Rev. Gastroenterol. 15: 284, 1948.

physicians concerned with the diagnosis and treatment of malignant lesions of the colon and rectum to suspect and carefully rule out the presence of other primary malignant or premalignant neoplasms, and most particularly in the supposedly uninvolved segments of the colon.

Symptoms and Diagnosis: Textbooks have for years distinguished, symptomatically, lesions of the left colon from those of the right by the tendency of the former to become obstructive. The liquid nature of the stool and the relatively large lumen delay obstructive symptoms in the right colon. Anemia is cited by many authors as a frequent early and leading sign in cancer of the cecum. However, a review of the autopsy material at the University of Minnesota by one of (L. F. S.)⁹ indicates that this sign is no more frequent in this segment of the colon than in other locations. Right lower quadrant pain and cachexia were recorded as the first and leading symptoms in 40 per cent of the patients with carcinoma of the cecum. C. W. Mayo⁷ states that 15 per cent of the patients with carcinoma of the right colon have had appendectomies after the onset of the symptoms referable to the malignant process.

Changes of bowel habits with abdominal discomfort are among the earliest symptoms of lesions of the transverse and descending colon. Here anemia, weight loss and obstructive symptoms are usually observed in the later stages of the disease. Bleeding with stools was noted as an early sign in 10 per cent of the transverse colon lesions and in 20 per cent of those located in the descending colon in the autopsy material at the University of Minnesota.⁹ Both Swinton³ and Collier³ report that 98 per cent of the patients in their series had positive histories of one or more of the cardinal findings with large bowel cancer, namely: 1. blood in the stool, 2. alteration of bowel habits, and 3. pain of an obstructive character.

With lesions of the sigmoid colon and rectum, bleeding is the most constant and one of the first signs of malignancy. In our group of cases, the passage of blood was cited in 85.6 per cent. By "change of bowel ha-

bits" is meant an alteration of, or deviation from normal. It is a symptom complex to be highly respected and one that warrants thorough investigation. Patients frequently complain of constipation and recall the increasing need for laxatives. Constipation was noted by 53.7 per cent of our patients, and diarrhea by 31.7 per cent. The "false urge" to empty the bowel with the expulsion of flatus occurring several times daily is significant and was noted by 37.8 per cent. Incompleteness of evacuation—the sensation that the movement is unsatisfactory—was mentioned by 41.9 per cent. The necessity to arise before the accustomed hour because of a desire for stool—"early morning diarrhea"—was complained of by 16.9 per cent.

Abdominal pain of an obstructive nature is a frequent early and leading symptom of carcinoma of the sigmoid, while with lesions involving the rectum it occurs late in the disease, and then usually only where a large fungating lesion blocks the lumen. Localized pain in the region of the anus and tenesmus are usually early symptoms of lesions involving the anal canal. Discharge, bleeding, and obstruction occur with advanced lesions in this location.

The discharges associated with malignancy of the lower bowel are usually described as blood, pus and mucus. Particles of fecal material, pus from degeneration of the growth, blood from ulceration and mucus as a result of the irritant are present. The condition may be altered materially by catharsis. The discharges possess a peculiar fetid odor, due to decomposing blood and malignant degeneration. Loss of weight is usually a late symptom; it is frequent in the presence of metastasis and where episodes of chronic obstruction and loss of protein, electrolytes and fluids have occurred. Cachexia, anemia and loss of strength are constant late symptoms.

Patients presenting any of the above mentioned signs and symptoms certainly deserve a thorough work-up to rule out large bowel malignancy. This work-up should, of course, be initiated by a thorough digital examination. In fact, this maneuver must be included as a requisite to every physical examination. When it is recalled that 50 per cent of all rectal and colon lesions could be palpated by the examining finger, the truth of the old clinical adage, "if you don't

9. Sherman, L. F.: Carcinoma of the Colon and Rectum, Surgical Staff Seminar, Minneapolis Veterans Hospital, March 1948.

put your finger in, you'll put your foot into it," is again emphasized. A rectovaginal examination should be done as well in every married female.

Proctoscopic visualization of the anal outlet and low rectum should precede sigmoidoscopic examination. It is true that bleeding per rectum is frequently due to internal hemorrhoids and other anorectal pathology, but this should never be asserted until all proximal pathology is carefully ruled out. In performing a diagnostic sigmoidoscopic examination, one should never be content with visualizing less than the distal 25 to 30 cm. of the bowel, because this is usually possible with proper preparation and in experienced hands. Since 75 to 80 per cent of all malignant lesions of the colon and rectum could be visualized by a 25 cm. sigmoidoscopic examination then why shouldn't this maneuver, too, be a part of every routine physical examination in the asymptomatic group above 40 years of age? The recently published findings at the University of Minnesota Cancer Detection Center¹⁰ support this thesis. Adenomatous polyps were discovered on sigmoidoscopic examination in the rectum and sigmoid colon of ten per cent of 2,106 asymptomatic patients over 45 years of age. Several silent carcinomas were likewise found in this portion of the lower bowel.

Colonic lesions must be verified by barium enema studies. Since double contrast studies are now quite universally performed, we feel that this is certainly the procedure of choice to give the examiner the best visualization. Many hitherto undetected small adenomas, as well as early malignancies, can now be demonstrated by this technique. Yet it must be remembered that even this method of diagnosis has some shortcomings, particularly with reference to the blind areas of the sigmoid and the flexures. However, we feel that double contrast barium enemas are accurate in diagnosing 95 per cent of the colon carcinomas.

Mode of Spread and Resection: We all recognize that sufficiently radical resections for malignant lesions of the colon and rectum depend to a large extent upon the surgeon's accurate knowledge of the

mode of spread of this neoplasm. We feel that these facts must be frequently reemphasized and we must be cognizant of any new information influencing the standards of minimum radicability.

The spread of carcinoma of the colon and rectum is a threefold process:

1. By *direct infiltration* the tumor cells tend to spread in the submucous coat and encircle the bowel, and in time to penetrate the muscular and serous coats, to infiltrate other organs and to form implants. Where adjacent organs and tissues are involved, whether it be peritoneum, omentum, stomach, spleen, uterus, bladder, etc., they should certainly be included in the resection of the primary tumor, if it is deemed resectable.

2. By the *invasion of blood vessels* tumor emboli spread to distant organs, most frequently the liver and lungs. The incidence of blood vessel invasion at the site of the lesion has been variously reported to be from 10 to 30 per cent. Coller¹¹ reported blood vessel involvement by carcinoma in 15 per cent of the postoperative malignant lesions of the colon and rectum in his series. Bacon and Rowe¹² noted involvement in 12.9 per cent of their cases. The prognosis as to cure is indeed poor where this occurs, yet in many instances the involvement is still localized and a radical resection will exonerate the involved vessels. We feel that certainly solitary metastatic nodules in the liver should be resected where possible. Several authors advocate more radical elimination of liver involvement by partial to subtotal hepatectomy. Solitary metastatic pulmonary nodules have been resected in a few instances with apparent success.

3. By *lymphatic metastasis*, the regional lymph nodes draining a given segment of colon become involved with tumor and must be resected widely for expected cures. Delamere, Poirier, and Cuneo¹³ and Jamieson and Dobson¹⁴ were the first to investigate

11. Coller, F. A.; Kay, E. B., and MacIntyre, R. S.: Regional Lymphatic Metastasis of Carcinoma of the Rectum, *Surgery* 8: 294, 1940.

12. Bacon, H. E., and Rowe, R. J.: The Radicability of Methods to Eliminate Colostomy; A Critical Review, *J. Internat. Coll. Surgeons* 11: 243, 1948.

13. Delamere, G.; Poirier, P., and Cuneo, B.: The Lymphatics, W. T. Keener and Co., Chicago, 1904.

14. Jamieson, V. K., and Dobson, V. F.: Lymphatics of the Colon, *Ann. Surg.* 50: 1077, 1909.

10. Hubbard, T. B.: Cancer Detection Center at University of Minnesota, *Minnesota Med.* 32: 1190 (Dec.) 1949.

thoroughly the lymphatic drainage of the large intestine. Since then the outstanding investigations of Gilchrist and David,^{15, 16, 17, 18} and Collier^{3, 11, 19} and his associates have further added to our knowledge.

The lymphatic drainage of the colon is conducted via three systems: the intramural, the intermediary, and the extramural lymphatic networks. The intramural system consists of the submucosal, intermuscular and subserosal networks. Where the large intestine is devoid of a continuous longitudinal muscle layer, the intermuscular and the subserosal networks are the same. The lymph channels begin about the mucosal glands of Lieberkuhn and drain to the submucosal network. This network communicates freely with similar channels above and below the site of the lesion, but lymph tends to flow toward the deeper intermuscular and subserosal networks.¹⁵

Since lymph channels follow the course of the radial blood vessels around the circumference of the bowel, carcinomata of the large intestine, as well as the rectum, tend to be annular. The lymph then flows from the intramuscular system through the intermediary lymph channels to the extramural lymphatic system. This consists of a group of nodes and lymph channels anatomically arranged about the blood vessels and are described by Jamieson and Dobson¹⁴ as corresponding to these vessels. Thus, there is the ileocolic chain, the right colic chain, the middle colic chain, the left colic chain and the inferior mesenteric chain. Along each chain there are aggregations of nodes that are designated as the epicolic, paracolic, intermediate and the main group of nodes.

The epicolic nodes lie in contact with the surface of the bowel, usually near the mesenteric border, either on the serous or

retroperitoneal aspects of the colon. The paracolic nodes lie in the mesocolon adjacent to the colon along the short terminal vessels leading from the arcades. The intermediate nodes are situated about midway between the arcades and the origins of the principal branches of the mesenteric vessels. The central nodes are those situated at the points of origin of the superior and inferior mesenteric arteries, where they form part of the periaortic group of nodes. The greatest lymphatic supply and the most elaborate chains of nodes are associated with the cecum and sigmoid, while the ascending and descending colon are relatively poorly supplied.²⁰

The ileocolic route of spread drains the terminal ileum, cecum, appendix and the greater part of the ascending colon. Lesions of the cecum may involve nodes at the hepatic flexure so they should be properly resected by performing a right colectomy up to the midcolic artery and with excision of a generous portion (25-30 cm.) of terminal ileum to include the node bearing area at the ileocolic angle. Lesions of the ascending colon and the hepatic flexure may involve the ileocolic nodes as well as the right colic and midcolic nodes. These lesions should be similarly resected but the distal line of transection should be distal to the midcolic artery to include that possible area of lymphatic spread.

The right colic chain drains the area supplied by the right colic artery. These nodes are not constant. They may drain downward into the ileocolic chain, may go medially toward the superior mesenteric nodes or may drain upward into the middle colic chain.

Similarly, the middle colic chain drains the area of the middle flexure and the proximal two-thirds of the transverse colon. Since the direction of the middle colic artery is to the right, toward the head of the pancreas, in the base of the mesocolon the spread of metastases is downward and toward the right. Furthermore, there is communication between the lymphatics of the transverse colon and those of the stomach and the greater omentum.

15. Gilchrist, R. K., and David, V. C.: Lymphatic Spread of Carcinoma of the Rectum, *Ann. Surg.* 108: 621, 1938.

16. Ibid.: Pathological Factors Influencing Five Year Survival in Radical Resection of the Large Bowel and Rectum for Carcinoma, *Ann. Surg.* 126: 421, 1947.

17. Ibid: Prognosis in Carcinoma of the Bowel, *Surg., Gynec. and Obst.* 86: 359, 1949.

18. Ibid: Abdominoperineal Removal of Low Lying Carcinoma of the Rectum, *Surg., Gynec. and Obst.* 89: 31, 1949.

19. Collier, F. D., and Vaughan, H. A.: Treatment of Carcinoma of the Colon, *Ann. Surg.* 121: 395, 1945.

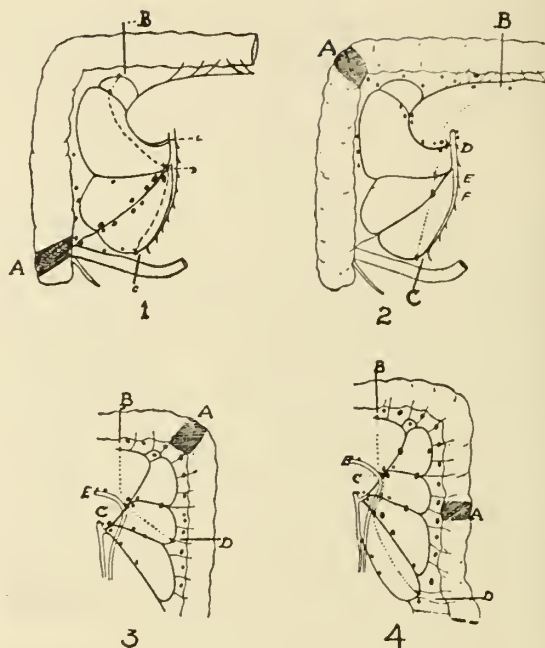
20. Taylor, G. W., and Nathanson, I. T.: Lymph Node Metastasis, Oxford Medical Publications, p. 284.

So lesions of the proximal two-thirds of the transverse colon should be properly extirpated by a wide segmental resection with the accompanying mesentery down to the superior mesenteric artery, to include the lesser omentum close to the stomach and the greater omentum. In some instances, the stomach should be resected if it is involved by invasion.

The left colic chain drains the area of distribution of the left colic artery. Neoplasms of the distal one half of the transverse colon would tend to drain toward the left, whereas neoplasms of the upper descending colon might either drain upward toward the splenic flexure or downward toward the sigmoidal vessels. Lesions of the splenic flexure may spread through lymphatics of the omentum and eventually drain to the splenic nodes. These lesions should be extirpated by performing a left colectomy with the proximal line of transection at the midcolic artery and the distal line just proximal to the sigmoidal vessels. The mesentery should be similarly resected widely to the origin of the left colic artery at the inferior mesenteric artery. In resecting splenic flexure lesions, the greater omentum should be included, and the spleen as well in advanced lesions.

Lesions involving the distal descending colon and proximal sigmoid colon should be resected by a left colectomy. However, neoplasms of the midsigmoid can be extirpated adequately by a wide segmental resection just distal to the descending ramus of the left colic artery and the distal line of transection down to the ampulla of the rectum to include the superior hemorrhoidal artery and the intervening mesentery up to the juncture of the left colic arteries. Our studies on cadavers have revealed this anastomosing marginal vessel to be so small in ten per cent of the bodies studied that it would probably be inadequate to carry sufficient blood supply to the distal left colon. However, complete absence of this anastomosis was not observed in any of the 90 bodies studied in our series. Several authors have reported the absence of this anastomosing marginal vessel in five to ten per cent of their cases.

It is not within the scope of this paper to describe in detail the lymphatic drainage of



Excision of growths situated in different parts of the colon and their "lymphatic areas" (after Jamieson and Dobson). 1, growth; 2 and 4, line of section of colon and mesocolon; 3 line of section of ileum. The points of ligation of the ileocolic, middle, right and left colic arteries are indicated.

Fig. II

the rectum and anus. This has been done elsewhere,^{21, 22} but a few salient facts must be mentioned to elucidate our choice of operative procedures for lesions at various levels. According to Miles²³ and subsequent investigators, the lymphatic system of the rectum and anal canal follow the courses of the superior, middle and inferior hemorrhoidal veins. The direction of the lymphatic metastases depends upon the direction of the lymph flow at the site of the lesion. If the usual lymphatic channels become obstructed by neoplastic emboli, the lymph will find unobstructed channels. Not until there have been extensive metastases along the superior zone of spread do all the

21. Bacon, H. E., and Sauer, I.: Selection of the Surgical Procedure in the Treatment of Cancer of the Rectum, *J. Internat. Coll. Surgeons* 13: 24, 1950.

22. Ibid: Surgical Treatment of Cancer of the Lower Bowel, Read before Am. Cancer Society, New York, Oct. 30, 1949.

23. Miles, W. E.: Pathology of Spread of Cancer of Rectum and its Bearing upon Surgery of Cancerous Rectum, *Surg., Gynec. and Obst.* 52: 350, 1931.

major lymph channels become sufficiently obstructed to cause retrograde flow. It is the consensus that retrograde metastasis seldom occurs more than six centimeters distal to a lesion.¹⁵

The chief route of lymphatic metastasis for lesions of the rectum is via the superior chain of lymphatics that largely accompany the superior hemorrhoidal vessels but may extend throughout the distal mesosigmoid. Neoplasms involving the distal three to four centimeters of the rectum may also metastasize laterally via the lymphatics that accompany the middle hemorrhoidal vessels in the lateral ligaments and subsequently involve the hypogastric and iliac chains of lymphatics. Collier and his associates¹¹ found involvement of the lateral areas of spread in 54 per cent of their cases with lesions in the distal three centimeters of the rectum, and they found no involvement with lesions above this area. Recently, it has been pointed out^{21, 22} that the lateral zone of lymphatic drainage of the rectum accompanies the middle hemorrhoidal vessels in the lateral ligaments well above the levator ani muscles. Wood and Wilkie²⁴ and Dukes²⁵ have emphasized that lateral lymphatic metastasis does not occur in the levators but that they might be involved by direct extension.

Malignancies of the anal canal may metastasize via the inferior chain of lymphatics to involve both the superficial and deep inguinal lymphatic vessels and nodes, and may simultaneously involve the lateral and superior zones of spread. Malignant lesions of the anal canal should be resected properly by performing a radical Miles type of resection. The mesosigmoid should be resected up to at least the first sigmoidal artery and a complementary pelvic lymphadenectomy done with extirpation of the preaortic and the iliac lymphatics from the inferior mesenteric artery down to the origin of the middle hemorrhoidal vessels. Bilateral inguinal node dissections should be performed as soon as the patient can tolerate an additional procedure.

24. Wood, W. Q., and Wilkie, D. P. D.: Carcinoma of the Rectum. *An Anatomicopathological Study*, Edinburgh, M. J. 40, VII: 321, 1933.

25. Dukes, W. C.: The Spread of Cancer of the Rectum, *Brit. J. Surg.* 17, 68: 643, 1930.

Malignant lesions of the distal three to four centimeters of the rectum should be treated similarly, except for the inguinal node dissections. It is granted that a complementary pelvic lymphadenectomy does add to the operating time of an already major surgical procedure, but if more radical lymph node dissections will decrease the incidence of local recurrence, then we must add this procedure to our armamentarium. We have performed this combined procedure in only 16 patients to date, two of which were reported to have involvement of the hypogastric nodes with cancer. We would like to urge other clinics to help evaluate this procedure.

We prefer to resect carcinomas of the proximal rectum (three to four centimeters above the anorectal line) and the distal sigmoid by proctosigmoidectomy ("pull-through"). It is possible with this procedure to resect the mesosigmoid widely up to the origin of the left colic artery and higher where an adequate anastomosis exists between the middle and left colic arteries. The pelvic dissection includes the wide removal of the middle and lateral sacral lymph nodes, the endopelvic fascia, and wide transection of the middle hemorrhoidal vessels. In the perineal phase the anal sphincter muscle bundles and their innervation are preserved but the levator muscles are transected widely.

TABLE V
MALIGNANCY OF ANAL CANAL, RECTUM, SIGMOID
Sept. 1, 1940—Dec. 31, 1949

Number cases	983
Number radical resection	761
Resectability rate	87.7%
Mortality from resections (761)	5.1%

Of our series of 983 patients with malignant lesions of the anus, rectum and colon, 761 were treated by some form of radical resection—a resectability rate of 87.7 per cent. This was calculated on the basis of those patients admitted to the operating room. Of the 761 patients resected, there were 39 postoperative deaths, a mortality rate of 5.1 per cent.

Table VI records the types of operative procedures performed. Of those patients resected by abdominoperineal proctosigmoidectomy, 58.4 per cent are alive and well five years following operation. This in-

cludes those patients with glandular involvement and/or local extension, as well as the favorable cases without nodal involvement or local extension, but excludes those with liver metastases. Our incidence of local recurrence with the "pull-through" procedure is 17.9 per cent.

TABLE VI
TYPES OF RESECTION FOR CARCINOMA
(December 31, 1949)

	No.	Deaths	Mor- tality
Sigmoidectomy			
Mikulicz-Rankin	38	3	7.8%
End-to-end anastomosis	46	3	6.5%
Hartman	22	3	13.6%
Abdominoperineal excision			
Miles	140	4	2.8%
Lahey	7	1	14.3%
Lockhart-Mummery	26	1	3.8%
Gabriel-Turner	2	0	0
Guneo-Seneque	2	0	0
Abdominoperineal proctosigmoidectomy	469	23	4.9%
Hemicolectomy with proctosigmoidectomy	9	1	11.1%
Total	761	39	5.1%

16 lymph node dissections

SUMMARY

1. The incidence of cancer of the colon and rectum now exceeds cancer of the stomach as the most frequent cause of death from cancer. Vital statistics indicate that approximately 30 to 40 per cent of these patients are now being salvaged. Another 25 to 35 per cent could be cured if their lesions were resected earlier; that is, before the regional lymph nodes become involved with cancer.

2. The incidence and histology are reviewed. Multiple malignancies are more common in the colon and rectum than the remainder of the gastrointestinal tract. Multiple malignancies were ascertained in 6.1 per cent of our cases. Adenomas were recorded in conjunction with primary carcinomas in 31.2 per cent of 171 operative cases. Twenty per cent were found to be malignant.

3. Early and leading signs and symptoms accompanying lesions in the various segments of the large bowel are reviewed. Diagnostic procedures are emphasized, where any of these signs and symptoms are manifest.

4. The mode of spread of cancer of the colon and rectum is reviewed in the various segments and the limits of minimum radicality in regard to resection for cure is discussed.

5. Of 983 patients in our series with malignant lesions of the anus, rectum and colon, 761 were treated by some form of radical resection. The mortality rate to date has been 5.1 per cent. The five-year survival has been 58.4 per cent. The incidence of local recurrence with the "pull-through" (abdominoperineal proctosigmoidectomy) procedure is 17.9 per cent.

255 S. 17th Street.

Covington County Receives Award—The Covington County Unit of the Alabama Division of the American Cancer Society, Inc., received national recognition on March 29 in New York.

Mr. and Mrs. Edward F. Reid, known throughout Alabama as "Mr. Cancer Prevention and his nagging wife," were invited to New York to receive the citation presented by General Wild Bill Donovan at a luncheon held for the press. The citation reads as follows: "The American Cancer Society, Inc., presents a 1950 Cancer Crusade Citation to the Covington County Unit, Alabama Division, for its program to persuade men and women of all races and classes to have periodic physical examinations. Many lives have been saved."

While in New York, Mr. and Mrs. Reid were engaged in press interviews, television and radio broadcasts. This is the first time the highest award for a County Unit has been received south of the Mason-Dixon line. This award is in conjunction with an intensive program that was carried out through the year in conjunction with the Parnassus Club. The Parnassus Club is considered one of the outstanding entries in "Build a Better Community" contest which is sponsored by the Kroger Company and its project is now in the final process of being judged at the state level.

Mr. Reid is also recognized this year as the Andalusia Man of the Year and last year received the highest individual award given by the State Cancer Division as being considered the outstanding individual in the field of cancer prevention. Mr. Reid said that all of this that has been accomplished by him is due to his wife, Gladys, who seems to have an unusual instinct of prodding him on when things look tough. When you ask Mr. Reid what is the secret of his success he says, "Just marry a nagging woman," but really they are a wonderful team, one being the visionary, the other the operator.—*The Montgomery Examiner*, March 30, 1950.

The United States at the beginning of 1950 had one doctor for every 750 persons. This is the best showing for any nation in the world, with the exception of Palestine where a temporarily high ratio exists because of an influx of refugee doctors.

Cancer Control—It is heartening and helpful to look at cancer in 1900 and in 1950.

Fifty years ago, practically none of the weapons now used to fight cancer were in existence. Microscopes of moderate magnification were available for tissue examination. Roentgen rays and radium had just been discovered, but their application to the treatment of cancer was not yet realized. Surgery was the only recognized form of treatment, and many body cavities were still closed to surgical exploration. Little or nothing was known about cancer causes and prevention. Such important laboratory procedures as tissue culture and selective animal breeding to produce constant biologic types of tissue were still in the experimental stage.

Few cures were reported because practically all cancer patients were in the advanced stage of the disease when first seen by a physician. Laymen and physicians alike were most pessimistic about a cure; much of the treatment given was only palliative in character. People believed in many fallacies regarding the nature, cause and treatment of the disease. Fear of the disease was rampant, and many shrank from even hearing the word cancer spoken aloud.

Little money or effort was spent on research. What was spent was largely in attempts to isolate an extrinsic causative agent, a bacterium or microscopic animal parasite. The intrinsic or biologic nature of the disease was not recognized beyond the theory of misplaced embryonic cells, which was widely hailed as a probable cause of all cancer.

Few, if any, statistical studies had been published beyond the death records of the Federal Bureau of the Census. These applied to but ten states then comprising the death registration area. There were no national, state or local organizations concerned with the cancer problem, and no federal or state tax funds were spent on control. Largely because there were few hopeful control measures to offer the cancer patient or the public, no attempt was made at public education. For similar reasons the subject was largely ignored in the education of medical and dental students. The condition was accepted professionally as something to be dealt with on an individual basis when encountered in medical practice.

Today, 50 years later, probably no disease holds a greater interest for the entire population than does cancer. Lay education has extended to all ages, starting in high school. The subject has also reached the forefront of professional education. Departments of oncology and cancer coordinators are found in many medical schools today. There is a lay cancer organization in every state and in the majority of local communities. Millions of dollars are spent annually by the federal and state governments in studying cancer and in providing facilities for diagnosis, treatment and care of cancer patients. Private cancer organizations are contributing additional millions to the same purpose. Many fellowships are now available to physicians for specialized training in the diagnosis and treatment of malignant disease.

The public is urged to obtain periodic medical examinations by its own physicians in order to find cancer in early and curable stages, and many people are doing so. Attention to the early signs of cancer to avoid its development to the incurable stage is emphasized.

The Hillsdale Plan for Tumor Detection, named after the Hillsdale County (Michigan) Medical Society, where the plan originated, provides for the periodic examination of patients by appointment in a physician's office. Copied throughout the United States, the plan is providing valuable information on the frequency of cancer in the general population.

Diagnostic methods and facilities are greatly improved. The electron microscope is revealing intimate details of cell structures and their probable place in metabolism. Biopsy permits examination of tissue without extensive surgical procedures. Studies of cells from body surfaces and fluids often make a diagnosis of cancer possible long before there is any microscopic evidence of the disease. Variations in the chemical content of the blood and other body fluids often indicate the presence of cancer in certain organs. The roentgen ray has proved invaluable as a diagnostic aid in many forms of cancer. The bronchoscope, the gastroscope and similar instruments permit examination of most body cavities without resort to major surgery. There are now approximately 500 clinics throughout the country for cancer diagnosis and treatment.

Radium and roentgen rays have joined other treatment facilities. Their use holds a firm place along with surgery as a recognized form of cancer therapy. Hormones of the opposite sex have proved valuable palliative therapeutic agents for some sex-specific malignancies. Scientists are studying radioactive isotopes resulting from splitting the atom for their effect on cancerous tissue. They have not yet proved to be curative, and their use is still in the experimental stage. All other treatment methods proposed to date are experimental, or applicable only to a small group of malignant growths.—*Rector, Today's Health, April 1950.*

Health Inventory at 40—Forty is the time to take a health inventory.

At this age, the insidious, progressive disorders so significant in later years generally first become manifest, according to Dr. Edward J. Stieglitz of Washington, D. C.

Understanding of the science of aging is advancing rapidly, Dr. Stieglitz points out in a report to the American Medical Association Council on Foods and Nutrition which appears in the April 8 Journal of the association. Workers in medicine's newest field, geriatrics, are learning more about the limitations and needs of aging men and women.

"In many respects, the two decades from 40 to 60 are the most significant," Dr. Stieglitz says. "During these years of late maturity we help to determine the future health of the aged. Geriatric medicine, to be fully effective, must be largely preventive medicine."

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SPECIAL CANCER ISSUE

April has been designated, by National Proclamation, as the month in which cancer is to be emphasized as one of the foremost enemies of public health. It is appropriate, therefore, that this issue of the Journal should be devoted to the problem of cancer.

The privilege of collaborating with the Editor of the Journal in publishing this special number is deeply appreciated by the Association's Cancer Control Committee. It is suggested that the April number each year be used by this Committee and the State Department of Health to present the problems and the activities in cancer control to the profession. To this end, support is pledged by the Committee composed of Drs. J. P. Chapman, Chairman; John Day Peake, John L. Branch, Roger D. Baker and F. H. Craddock, Jr.

The American Cancer Society, in April, will launch a campaign of enlistment and education for the laity and medical profession, along with a nation-wide appeal for funds to promote an extensive research program which was inaugurated a few years ago. It is significant that the funds invested in research in Alabama each year exceeds the national quota sent out of the state from the April cancer drive. The Alabama Di-

vision of the American Cancer Society has organized each county into an active unit to carry out the objectives of this campaign. Full support of this movement by every physician in Alabama is urged and expected.

THE CANCER SEMINAR

The first effort at having a cancer seminar in Alabama was tried out in Birmingham, Feb. 21, 22, and 23. The Cancer Control Committee and the State Division of the American Cancer Society have long desired to have such a program for Alabama physicians. A special committee from these organizations, working with the Medical College of Alabama, made it possible for a large number of physicians from our state and adjoining states to enjoy lectures and discussions on various phases of cancer by eminent specialists. Among the speakers present were Louis H. Clerf and Lloyd F. Sherman, of Philadelphia; Frank Adair, Oliver S. Moore, Jr., Charles S. Cameron and Alexander Brunschwig from New York; A. N. Arneson of St. Louis, William F. Reinhoff of Baltimore, Sidney Farber of Boston, and Ralph M. Caulk of Washington, D. C.

The papers used in this issue of the Journal have been contributed by guests of the Cancer Seminar.

THE CANCER CONTROL PROGRAM

In 1943 the State Legislature appropriated funds for cancer work in Alabama. Immediately the State Department of Health made plans for this work, assigning it to the Division of Preventable Diseases. Dr. W. H. Y. Smith, the Director of this Bureau, assisted by Miss Catherine Corley, have had complete charge of this program. It is well to indicate again the procedure in referring indigent cancer patients to the State Department of Health for state aid in treatment. A simplified procedure is as follows:

Application should be made through your County Health Officer, with completed forms sent to Dr. Smith in Montgomery. The State Department will review the case and notify the physician and patient when and where the patient is to go for further examination and treatment. The Clinic to which the patient is assigned will follow up the progress of the case, and keep in touch with the Montgomery office.

THE TUMOR REGISTRY

A year ago the Alabama Association of Pathologists, through a special five-year grant from the Alabama Division of the American Cancer Society, established a Tumor Registry for the study and evaluation of the cancer problem in Alabama. The offices and headquarters of the Registry are in the Public Health Building in Birmingham, employing especially trained personnel who follow up every case of cancer diagnosed by pathologists in Alabama. The Registry is able to obtain reports and microscopic slides of cancer tissue diagnosed by the various pathologists of the state. More than 6000 histologically diagnosed new tumor cases have been collected from pathologists' records during this short period. Valuable data are obtained regarding the incidence of cancer and the delay period, and the Registry makes possible a follow-up study of the end results.

Each pathologist has agreed to analyze some phase of the cancer problem, using the material made available by the Registry. Two such studies are under way, one by Dr. J. A. Cunningham on melanoma in Alabama, and another by Dr. A. E. Casey on the estimated cancer incidence, indicating that there are considerably more cancer cases than have been suspected.

Friendly and cooperative relations have been established between the personnel of the Registry, the pathologists, the medical librarians and administrators of the various hospitals in Alabama, the State Registrar of Vital Statistics, and the Cancer Control Division and Cancer Clinics of the State Department of Health.

Already it has become apparent that reporting of cancer cases has been stimulated on the part of hospitals as well as individual physicians. It is estimated that some 2000 new cases of cancer for each of 1948 and 1949 would not have been available for analysis had not the Registry been in existence.

The Registry collects, classifies and analyzes pertinent data on all cancerous and precancerous lesions diagnosed by pathologists of the state, and this information is confidential and private.

The Cancer Control Committee approves this project, and urges all hospitals, pathologists and physicians to cooperate fully with this excellent program.

THE ALABAMA DIVISION OF THE AMERICAN CANCER SOCIETY

Because cancer control is both an unusual and a complex medical problem, the Alabama Division of the American Cancer Society conducts all of its activities in close co-operation with the medical profession of the state.

The policies of the Division, its plan of action, and its operation are determined by a State Executive Committee, and the majority of the members of the committee are medical men who serve without compensation. The Chairman is Dr. J. P. Chapman of Selma.

On the county level, the local volunteer units of the Division work in collaboration with members of the local Medical Society and the County Health Officer.

The first objective of the Division's statewide organization is the cancer education program. This program is carried out locally under the direction of the County Commander and a corps of volunteer aides who constitute the Public Information Committee. Through the newspapers, radio stations, men's and women's clubs and organizations, rural organizations, schools and other channels of mass communication, the Division, twelve months in the year, strives to put into the hands of as many people as it is possible to reach certain basic and elemental facts about cancer.

These facts emphasize four major points: that cancer is not a "hopeless" disease; that early and prompt treatment by a recognized medical doctor can bring about clinical cures in many cases; that early cancer usually causes certain symptoms; and that, on the appearance of any of these symptoms, the patient should go at once to his doctor for examination, and treatment if necessary.

The four major points are emphasized in numerous ways, but principally in newspaper stories in the daily and weekly press; in spot announcements, 15-minute discussion type programs and dramatized transcriptions on radio; in talks and motion pictures to organizations; in special programs for schools; and in the widespread distribution of literature. In the last twelve months, the cancer education program has reached more people in Alabama than ever before.

In the long-range control effort, the Division and the American Cancer Society fi-

nance five different cancer research projects being conducted in the state by Alabama medical and scientific institutions. More than \$250,000 has been invested in these projects in the last two years alone. They are being conducted by Alabama Polytechnic Institute at Auburn under the direction of Dr. W. D. Salmon; at the Cancer Research Laboratory of the Medical College of Alabama in Birmingham under the direction of Dr. J. K. Cline; at the Southern Research Institute under the direction of Dr. Howard Skipper; at Baptist Hospital in Birmingham under the direction of Dr. Albert Casey; and by the Alabama Association of Pathologists in Birmingham.

The Alabama Division supplements the treatment program of the state-aid clinics by providing transportation for indigent patients who would be unable to continue treatment without it, and by providing narcotics for indigent patients at the direction of attending physicians. The Division does not provide other funds for the treatment of indigents because of the vast sum of money that would be required. Different estimates of the total that would have to be made available for such purposes vary from \$500,000 to \$750,000.

Individual communications from physicians in various sections of the state indicate that the cancer education program is having strong effect on the public. The physicians say that the number of patients coming to them for cancer examinations is at an all-time high, but, more important, that the percentage of early cases also is at an all-time high. In the light of these communications and many informal conversations with many physicians, the Alabama Division is certain that even greater progress than can actually be measured is being made toward eliminating the preventable deaths cancer is causing.

THE CANCER BULLETIN

Using funds made available through the National Cancer Institute a year's subscription to The Cancer Bulletin, a bi-monthly magazine, will soon be sent to every physician in the State.

The executive editor writes: "All of the articles are medically sound and have been thoroughly edited by members of our medical staff. Moreover, they have been written

in such a form as to attract and hold the attention of the busy practicing physician."

The Division of Cancer Control of the State Department of Health hopes that you will find this bulletin helpful.

NEW FILM ON BREAST CANCER

The Division of Cancer Control has purchased the film, Breast Cancer: The Problem of Early Diagnosis. This is the second in the series of teaching films for the medical profession being sponsored by the American Cancer Society and the National Cancer Institute, U. S. Public Health Service. It would be a wise idea for the physicians of the State to be familiar with the techniques advocated in this film for in the very near future a film designed to teach women self-examination of the breasts will be released.

The running time of this 16 mm. sound film, in color, is 34 minutes and it can be borrowed from the Division of Cancer Control of the State Department of Health. To insure orderly distribution, please order in plenty of time and return promptly.

MEETINGS

ALABAMA ASSOCIATION OF GYNECOLOGISTS AND OBSTETRICIANS

April 19, 1950

Tutwiler Hotel

Birmingham

PROGRAM

- 10:00 A. M. Dr. Ralph A. Reis,
Associate Professor of Obstetrics
and Gynecology,
Northwestern Medical School,
Chicago, Illinois.
Subject: Causes and Treatment of
Threatened and Habitual Abor-
tions.
- 10:45 A. M. 15 minutes devoted to interrogation.
- 11:00 A. M. Dr. William F. Mengert,
Professor of Obstetrics and Gynecology,
Southwestern Medical School,
Dallas, Texas.
Subject: Determination of Pelvic
Capacity.
- 11:45 A. M. 15 minutes devoted to interrogation.
- 12:00 M. Business Meeting.
- 1:00 P. M. Luncheon, Tutwiler Hotel.
- 2:00 P. M. Dr. John C. Burch,
Professor of Gynecology,
Vanderbilt School of Medicine,
Nashville, Tennessee.
Subject: The Surgical Importance of
Ovarian Failure.

2:45 P. M. 15 minutes devoted to interrogation.

3:00 P. M. Dr. Ben Wilson,
Associate in Dept. of Experimental
Surgery,
Southwestern Medical School,
Dallas, Texas.
Subject: Fluid Balance.

3:45 P. M. 15 minutes devoted to interrogation.

4:00 P. M. Dr. Ralph A. Reis,
Associate Professor of Obstetrics
and Gynecology,
Northwestern Medical School,
Chicago, Illinois.

Subject: Functional Uterine Bleeding.

4:45 P. M. 15 minutes devoted to interrogation.

5:30-6:30 Cocktail hour, Tutwiler Hotel—Compliments, Ob. and Gyn. Society, Birmingham.

6:30-7:30 Dinner, Tutwiler Hotel.

8:00 P. M. Dr. William F. Mengert,
Professor of Obstetrics and Gynecology,
Southwestern Medical School,
Dallas, Texas.
Subject: Endometriosis.

8:45 P. M. 15 minutes devoted to interrogation.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

YOUR PRIVILEGE AND YOUR DUTY

W. A. Dozier, Jr.
Director of Public Relations

On May 2 the greater part of the active voters of Alabama will go to the polls to vote for their choice of candidates to serve in Washington and in Montgomery. Election in a Democratic primary in Alabama is tantamount to election to office, for Alabama for all intents and purposes is still a one-party state. Such a statement cannot be made of a few counties, but by and large such is true.

Perhaps a slight review of our government would not be amiss, for quite often people forget. And even more often the issues become so clouded that one cannot see the forest for the trees. We in America say that we have a democracy. Actually we should say we have a representative democracy, for each voter does not cast his ballot on every issue. Instead we elect a man to office, and this man in turn votes for us on the various issues which may arise. This principle is carried even to our election of a president, though some people today would change the electoral college. Some people argue that a pure democracy where each person has his say on each issue should be tried, but pure expediency requires that we as a nation use representatives.

Perhaps the greatest fault to be found with a representative government such as ours lies in us, the voters; and this fault takes many facets. For example, once a man is elected, most of us lose interest in keeping

up with the issues that arise. Far too few people ever let their representative know how they, the voters, feel on various matters. It behooves all of us to remember that election to office does not endow a man with knowledge but endows him merely with power.

Doubtlessly the greatest error many people commit is to fail to exercise their privilege of voting. In national elections, for example, less than fifty per cent of the qualified voters have normally voted. This is a sad reflection on our participation in our civic affairs. After the election of last November some of the political leaders in Ohio selected Summit County, which includes Akron, for studying the records. Among the interesting facts discovered was that eighteen per cent of the physicians of the county did not vote in the 1948 election. Thirteen per cent were not even registered. Twenty-two per cent of the physician's wives did not vote, and sixteen per cent were not registered. These high percentages, mind you, were within a group of educated people who certainly should realize the importance of casting their votes.

It will be noticed that in the foregoing paragraph "privilege of voting" and not "right to vote" was used. Too often the latter is bandied about much too freely. In many of the campaigns to get out the vote too much is made of "your right to vote." It is not a right but a privilege, and with it goes the responsibility of being informed and of voting intelligently. Too often we, as a peo-

ple, do not precede the granting of the privilege of voting with enough education on the responsibilities that go with this privilege. Until a person is capable of assuming these responsibilities and until he makes an effort to fulfill his obligations to society, he surely cannot demand a privilege by calling it his right.

One can even take this business of voting further and say it is your duty to vote. You as a citizen should make your preference known at the polls. Only through your taking interest in elections and election issues and then voting can you fulfill your duty as

a citizen. So many people complain about our government, but also many of these do not bother themselves to shoulder their responsibilities or meet their duties.

What then is your privilege and your duty? First know the issues at stake. From the mass of mumbo-jumbo that will be said in the next few weeks sift the wheat from the chaff. Measure each candidate by your political and social views, which of course presupposes your having decided on your own yardstick for government. Then go to the polls and vote your convictions. It's not your right; it's your privilege and your duty.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

A BRIGHTER CANCER OUTLOOK

One of the most important things to remember about cancer is that many of the old-time notions about it belong to the past. The people of Alabama and the United States need to revise their conceptions of the disease. They have received a great deal of cancer education. But they should have a great deal more. There is still much work to be done by the official and volunteer cancer-curbing agencies.

Perhaps the most important change that needs to be made in public knowledge regarding cancer is that the cancer patient's outlook is vastly more promising than it was even a few years ago. It is seen in the records of cancer victims and former cancer victims all over the country. The pleasant truth is that many cancer cases are curable. But how true that statement may be in a particular case depends upon several factors. Among them is the victim's willingness to do his part to obtain a cure. Optimism is especially justified when the disease occurs on the skin or lips, in the mouth, in the breast or in the uterus.

The victim's willingness to do his part includes a willingness to face the facts calmly. It means doing something—the right thing—when their significance is pointed out. It means acting quickly. It means, in brief, detecting the disease early and beginning treatment early.

There are many ways in which cancer victims throw away their chances of recovery. One of them is allowing themselves to be treated by anyone but properly licensed physicians. There is no telling how many lives are needlessly sacrificed every year to a failure to heed this simple but vital maxim. There is no place for faith healers and quacks in any field of medicine. It is a tragedy of tragedies to have any truck with them whatsoever when there is a possibility that one has cancer. For in few forms of illness is time so much of the essence. In few indeed is the victim likely to pay so heavily for its loss. And valuable, indeed vital, time is lost as long as anyone with cancer goes for "treatment" to someone who promises a cure to be achieved outside the bounds of regular medical procedures.

One reason so many people fall prey to designing and unscrupulous cancer quacks is that they do not want their friends to know they have the disease. Many of them indeed do not want to know themselves. They cling to the foolish theory that "what you don't know won't hurt you." Instead of going courageously to their family physicians or cancer diagnostic clinics and finding out the brutal or happy truth, they prefer to dodge the issue. They listen to the dulcet words of those who promise the ending of those troublesome and disturbing symptoms at slight cost and inconvenience. In the end, they find both of these promises have been false. They find they must go to a great deal of trouble and inconvenience before

they can get a recovery through legitimate medical treatment as a result of giving the disease time to become more advanced. And they find the cost is also much greater than it would have been had they done the right thing the first time.

As for the unwillingness to let other people know they have cancer, that is ridiculous. It is absurd and silly. There is no more reason to be ashamed to tell your friends that you have cancer—if you have it—than there is to admit that you have appendicitis or that your child has measles. It is no disgrace to have cancer. It is not due to any act of yours or of anybody else that anyone should be ashamed of. To have cancer is no more reflection upon your parents or forebears than an attack of scarlet fever. It does not mean there is something wrong with your blood. You need not think people will regard it as a punishment, direct or indirect, for wrongdoing. It is a great misfortune. But so are many other things that happen to most of us. So avoid secrecy by all means. If you really have cancer, you will need the encouragement and cooperation of your family and friends. If the examination shows that you do not have it, then they will rejoice with you. Don't make yourself miserable by carrying this heavy load of uncertainty and fear under a mask of secrecy and deception.

Generally speaking, early cancer is painless. So don't think you don't have the disease because you feel no pain. Actually, when cancer does produce pain, it is usually in an advanced stage. So be on the watch-out for other evidences that the disease may be present.

Watch especially for some form of growth. That doesn't mean just any kind of growth of course. It doesn't mean that you should regard an ordinary mole or wart as a certain sign of cancer. But it does mean that unusual types of growth should be regarded with cancer-conscious suspicion. It means that a lump in the female breast is one of the most characteristic cancer symptoms. It means that you should think of cancer if and when a mole or wart begins getting larger. It means that a sore or lump on the tongue or lip should be taken seriously if it does not disappear fairly soon. That is also true of any other type of sore or abnormal skin or gland condition that hangs on.

There are other abnormalities that may or may not indicate cancer. There may be an unusual discharge from one of the natural body openings. This is not necessarily bloody discharge. It may contain no blood at all. It may be white. Cancer of the uterus, for instance, may produce a white discharge at first. The irregular bleeding often associated with cancer may come later. Blood in the stools is sometimes an early symptom of this disease, but often there is none at that stage. Blood in the urine may be an early-stage sign that one has cancer of the kidney or bladder.

Medical men differ somewhat as to the specific causes of cancer. But they are in general agreement as to its fundamental cause: They agree that the disease is due to chronic irritation or inflammation. They remind you that cancer of the mouth may easily be traceable to irritation caused by a jagged tooth. Cancer of the lip, they say, can logically be attributed to irritation produced by the pressure of a pipe stem. Cancer of the skin among certain industrial workers can be laid squarely at the door of irritating chemicals and other products which they handle. Other types of cancer of the skin are found among farmers. They are attributed to exposure to the elements. Prolonged inflammation of the cervix may lead to cancer involving that part of the body. This inflammation may be due to several causes, varying from injuries received at childbirth to any one of many forms of infection. Workers in special fields are exposed to peculiar cancer hazards: Those who spend much time with x-rays, for example, must receive protection against radiation. Otherwise they are in grave danger of developing cancers.

There is disagreement among physicians as to the part played by heredity in human susceptibility to cancer. Some say it is a factor. Others seriously question this. Even the first group, however, do not consider heredity a particularly heavy weight in the balance. There is certainly no occasion for you to consider yourself doomed to have cancer just because there is cancer in your family, if there is. With so many people having cancer histories, it would be rather unusual to find a family whose health history does not contain one or more references to this disease.

Fortunately, medical science has three powerful weapons at its command for use against cancer. They are radium, the x-ray and surgery.

These three methods of treating cancer do not mean that a person with this disease has a three-way choice. Nor does it mean that, if one or two fail, he still has a third line of defense, so to speak. This may be true in a particular case. But it may not be. And in most cases it isn't. The cancer specialist decides which one should be used after making a careful study of the case. He will be guided by such matters as the nature of the cancer and its location. Sometimes it is found that two may be used in conjunction with each other. Surgery, for example, often proves more effective when either radium or x-ray is used too.

Radium is produced from certain ores found in various parts of the world. As the product disintegrates, it sends forth a gas known as radon. This, in turn, breaks down and produces the rays which have contributed so importantly to the cure of cancer.

These rays are of course extraordinarily penetrating. Human flesh presents no barrier to them. Neither does the hardest steel. Either radium salt or radon (the already mentioned gas from radium) may be used. The latter is obtained from the former in solution and pumped off by means of an oil and mercury apparatus. This gas is then forced into small gold tubing. Then the tubing is cut into lengths known as seeds. These seeds are placed in the cancer area while the patient is under local or general anesthetic. They are not removed. They either become a part of the cancerous growth or slough away with it.

Modern x-ray machines attack cancer cells with a barrage of emanations backed by electrical power ranging from 100,000 to 1,000,000 volts. Naturally, the less powerful machines are used for skin cancers and others near the surface. The more potent barrages are used for cancers situated at some distance inside the body. Of course the intensity of these x-ray attacks is determined with great care by the attending cancer specialist. He is guided by his general knowledge of the disease and by particular factors involving the particular case about to be treated. These include the type and location of the cancer, the size of the patient and the

relation of the cancer to the skin and to nearby vital organs.

Surgery is considered the best form of cancer therapy. As already pointed out, however, its effectiveness is often increased by the use of one of the other two forms. This is due to the fact that the entire diseased area must be removed. Because of this, surgeons often prefer to perform a cancer operation in two or even three stages. The patient is able to build himself or herself up between stages when this is done. It also greatly reduces the shock normally resulting from a one-stage extensive operation. This procedure, too, has the advantage of usually proving more beneficial from the operative viewpoint.

The success of these three methods of cancer-curing should not lead anyone to believe that cancer is no longer a serious disease. That, unfortunately, is anything but the truth. There is still an imperative need for every possible cancer victim to detect his or her disease at the earliest possible moment. Optimism is the new keynote in cancer curbing. But optimism is most justified when the patient gets the benefit of these helpful curative agencies early. That makes every potential cancer patient—which means everyone—his own protector against this disease.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CANCER CONTROL IN ALABAMA

Hope for indigent patients in Alabama suffering from cancer came with the passage of a cancer law in July 1943. By December of that year four clinics, Hillman and Norwood in Birmingham and St. Margaret's and Oak Park in Montgomery, opened their doors for the treatment and diagnosis of cancer in the indigent. The following March saw the City Hospital Clinic in Mobile start functioning, and in November a clinic started in Selma. But two years later this last formed clinic was discontinued.

Steadily the Clinics have grown from the 36 patients referred* and the 32 cases examined in 1943, through 1944, with 518 referred and 439 examined, and 1945, with 695 re-

*The difference between referred and treated represents those patients who did not report to the clinic.

ferred and 577 examined, and 1946, with 1082 referred and 970 examined, and 1947, with 1446 referred and 1316 examined, to the peak year 1948 when 1736 patients were referred and 1497 were examined. With 1949 came a decline. Not because of lack of cancer patients nor lack of facilities but because of lack of finances, there was a downward trend in patient population. In that year 1172 patients were referred and 853 examined. Spending in State government is held within the budget. When overspending occurs, one of two things happens. You either

spend until the money runs out and then close up for awhile or you prorate your finances on a monthly allotment basis. The latter method was chosen to keep all Clinics in operation the year round.

The average cost for the diagnosis and treatment of a cancer case is around ninety-two dollars and five cents. The eighty-five thousand dollars appropriated each year for cancer treatment allowed a maximum of 923 patients to be treated. It can be seen readily how quickly the next year's appropriation could be ruined by trying to pay for an ex-

FOR BREVITY SAKE SOME "DO'S" AND "DON'TS"
ARE GIVEN FOR YOUR CONSIDERATION

"DO'S"

1. WRITE LEGIBLY. ILLEGIBILITY CAN CAUSE DELAY IN GETTING PATIENT TO CLINIC.
2. FILL IN INFORMATION ON ALL ITEMS ON THE FORM. LETTERS HAVE TO BE WRITTEN TO THE REFERRING PHYSICIAN FOR INFORMATION WHEN FORM IS INCOMPLETELY FILLED OUT. THIS CAUSES DELAY IN PATIENT'S ADMITTANCE TO CLINIC. EMBARRASSMENT ARISES WHEN INFORMATION IS INCOMPLETE. A GLARING EXAMPLE WAS A HUSBAND AND WIFE REFERRED AS CANCER OF THE THROAT. BOTH HAD SECONDARY SYPHILIS. A BLOOD TEST WOULD HAVE REVEALED THE DIAGNOSIS.
3. GIVE YOUR DIAGNOSIS AND SITE OF LESION. CANCER CLINICIANS LIKE TO KNOW THIS.
4. GIVE DURATION, COMPLICATIONS AND EVIDENCE OF METASTASIS. LATE HOPELESS CASES CAN BE STOPPED BEFORE REACHING THE CLINICS. ISN'T IT BETTER TO SAVE FIVE EARLY CANCER OF THE CERVIX CASES THAN TO LENGTHEN THE LIFE OF ONE HOPELESS CASE FOR ONLY THREE TO FOUR MONTHS?
5. OUTLINE PREVIOUS TREATMENT IN DETAIL AND OR BIOPSY IF DONE. IF PATIENTS WERE REFERRED TO YOU, YOU WOULD LIKE TO KNOW THIS. SO DOES THE CANCER CLINICIAN.
6. SIGN YOUR NAME. WITHOUT YOUR SIGNATURE THE PATIENT CANNOT GET INTO THE CLINIC.
7. REPORT ALL YOUR CANCER CASES. STATISTICS HELP FIGHT DISEASE BY CREATING INTEREST.
8. GIVE CANCER AS THE CAUSE OF DEATH ON DEATH CERTIFICATE WHEN DEATH IS DUE TO CANCER. FEDERAL FUNDS ARE ALLOCATED ON A FORMULA BASIS. PART OF THE FORMULA IS THE RATIO OF CANCER DEATHS TO TOTAL DEATHS AS COMPARED TO THIS RATIO FOR THE COUNTRY AS A WHOLE. ALABAMA'S RATIO IS 1 TO 14. FOR THE UNITED STATES IT IS 1 TO 8. FUNDS ARE LOST BECAUSE CANCER DEATHS GO UNREPORTED.
9. TRY PACKING THE BLEEDING CERVIX OR UTERUS YOURSELF. CANCER CLINICIANS ARE NOT PAID FOR THEIR SERVICES. ISN'T IT UNFAIR TO ASK THEM TO DO THIS FOR YOU?
10. RAISE YOUR INDEX OF SUSPICION IN CANCER.

"DON'TS"

1. DO NOT REFER LATE HOPELESS CANCER CASES. EIGHTY-FIVE THOUSAND DOLLARS MIGHT BE ENOUGH TO TREAT ONLY EIGHTY-FIVE CASES AND THE LIVES OF THOSE PATIENTS MIGHT BE INCREASED BY A FEW MONTHS ONLY. A LATE CASE COSTS INTO THE HUNDREDS OF DOLLARS. AN EARLY CASE COSTS LESS THAN A HUNDRED.
2. DO NOT NEGLECT THE BLOOD TEST. SYPHILIS AND CANCER CAN LOOK ALIKE.
3. DO NOT REFER SKIN CANCERS. LIMITED FINANCES REQUIRE THE ELIMINATION OF THIS TYPE OF CANCER.
4. DO NOT REFER LYMPHOSARCOMAS AND HOPELESS BRAIN CASES. BOTH USE UP PRECIOUS MONEY THAT COULD BE USED TO "CURE" EARLY CANCER.
5. DO NOT SEND APPLICATION DIRECT TO THE STATE HEALTH DEPARTMENT. SEND IT TO LOCAL WELFARE DEPARTMENT FIRST FOR INDIGENCY INVESTIGATION.
6. DO NOT SEND PATIENT TO CLINIC UNTIL LETTER OF APPOINTMENT IS RECEIVED.
7. DO NOT MAKE CANCER CLINIC A GENERAL MEDICAL CLINIC.
8. DO NOT SEND PATIENTS FOR CHECK-UP ON OTHER THAN CLINIC DAYS. CHECK WITH YOUR HEALTH OFFICER FOR THIS INFORMATION.
9. DO NOT FILL OUT SECOND FORM FOR CHECK-UP.
10. DO NOT FAIL TO REPORT ALL YOUR CANCER CASES AND DEATHS.

cess of four or five hundred patients from the previous year. The impasse was reached in 1949 when rationing of patients became necessary. The early curable case was admitted to the Clinics at the expense of skin and a few other types of cancer.

This curtailment was decided by necessity, not by lack of interest. Since skin cancer comprised around thirty-three per cent of the Clinic load, this type offered a better chance of fitting the cloth to suit the pattern. And, too, patients were more likely to raise the money for the two or three x-ray treatments required for "cure" than they could for the more costly treatments for other forms of cancer. It was hard to resist the demands and emotions of cancer patients, but hope for some patients was better than hopelessness for all.

The follow-up on the treated cancer patients is interesting. Of the 25 patients found malignant and treated in 1943, 15 are still living and 10 are dead. The difference between this figure and the previously given examined figure represents the patients found non-malignant by the Clinics. But in 1944, of the 365 malignant cases treated, 206 are living and 159 are dead. Patients treated in 1945 represent almost a five-year survival period; and of the 465 malignant patients treated, 312 are living and 153 are dead. For 1946 there are 580 living and 188 dead. Gradually through the years of operation emphasis has been laid on finding cancer early. Whether the survival of cancer patients in the last few years can be attributed to this, only time will tell. Of the 1028 cancer patients treated in 1947, there are 800 alive and 228 dead. And for 1948, 885 are still living with 202 dead. Whether selectivity of patients had anything to do with 1949, again only time will tell but of the 608 cancer patients treated 570 are still alive and only 38 are dead.

To get an indigent patient into a cancer clinic a certain procedure is necessary. Call it red tape if you will but it is the red tape that is necessary if clinics are to operate efficiently and smoothly. The referring doctor initiates the cancer form. Please refer to the boxes headed "do's" and "don'ts." After the physician has filled in the form and signed it, it is sent to the Welfare Department for the necessary indigency investigation. From there it goes to the County

Health Department and then on to the State Health Department for routing and flow of patients to the clinics. You, the Clinic, the patient and Welfare Department are notified of his appointment, date and clinic.

* * *

CURRENT MORBIDITY STATISTICS

1950

	Jan.	Feb.	E. E.* Feb.
Typhoid	2	7	3
Undulant fever	4	3	2
Meningitis	3	9	13
Scarlet fever	81	60	71
Whooping cough	31	96	77
Diphtheria	37	23	32
Tetanus	2	5	2
Tuberculosis	148	189	182
Tularemia	2	2	2
Amebic dysentery	0	6	2
Malaria	1	5	49
Influenza	753	1463	1313
Smallpox	0	0	1
Measles	135	203	485
Poliomyelitis	6	8	2
Encephalitis	0	0	1
Chickenpox	310	283	163
Typhus	9	3	20
Mumps	124	164	206
Cancer	349	310	225
Pellagra	1	3	2
Pneumonia	252	403	501
Syphilis	750	618	1483
Chancroid	13	9	13
Gonorrhea	388	335	483
Rabies—Human cases	0	0	0
Positive animal heads	37	33	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

FEBRUARY 1950

Examinations for diphtheria bacilli and Vincent's	217
Agglutination tests (typhoid, Brill's and undulant fever)	989
Typhoid cultures (blood, feces and urine)	445
Examinations for malaria	269
Examinations for intestinal parasites	4,484
Serologic tests for syphilis (blood and spinal fluid)	23,866
Darkfield examinations	7
Examinations for gonococci	1,840
Examinations for tubercle bacilli	2,881
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	103
Water examinations	1,168
Milk and dairy products examinations	3,627
Miscellaneous	1,117

Total 41,013

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR DECEMBER 1943, AND
COMPARATIVE RATES

Live Births, Stillbirths, and Deaths by Cause	Number Registered During Dec. 1949			December Rates* (Annual Basis)		
	Total	White	Colored	1949	1948	1947
Total live births	7187	**	**	27.3	28.3	27.8
Total stillbirths	169	**	**	23.0	25.0	26.5
Deaths (stillbirths excluded)	2491	1404	1087	9.5	8.7	9.6
Infant deaths:						
under one year	277	127	150	38.5	40.6	46.0
under one month	184	89	95	25.6	27.5	30.0
Cause of Death						
Tuberculosis, 001-019	55	20	35	20.9	28.4	35.7
Syphilis, 020-029	20	2	18	7.6	6.1	11.9
Dysentery, 045-048	2	2	—	0.8	***	***
Diphtheria, 055	2	1	1	0.8	0.8	2.3
Whooping cough, 056	2	1	1	0.8	1.5	4.2
Meningococcal infections, 057	—	—	—	—	1.2	1.5
Poliomyelitis, 080, 081	2	2	—	0.8	0.4	0.8
Typhus fever, 100-108	—	—	—	—	1.2	—
Malaria, 110-117	2	1	1	0.8	—	0.8
Malignant neoplasms, 140-200, 202, 203†	219	151	68	83.1	78.3	71.4
Diabetes mellitus, 260	33	21	12	12.5	17.3	12.7
Pellagra, 281	—	—	—	—	1.2	1.9
Vascular lesions of central nervous system, 330-334	299	163	136	113.5	92.1	100.6
Other diseases of nervous system, 300-318, 340-398	45	25	20	17.1	10.7	***
Rheumatic fever, 400- 402	6	4	2	2.3	0.4	***
Diseases of the heart, 410-443	752	452	300	285.5	210.7	232.2
Diseases of the arte- ries, 450-456	34	19	15	12.9	7.7	14.6
Other diseases of the circulatory system, 444-447, 460-468	34	18	16	12.9	2.7	***
Influenza, 480-483	17	7	10	6.4	9.2	6.9
Pneumonia, 490-493	113	53	60	42.9	44.5	61.4
Bronchitis, 500-502	5	4	1	1.9	2.3	1.9
Appendicitis, 550-553	5	3	2	1.9	2.3	1.9
Intestinal obstruction and hernia, 560, 561, 570	21	11	10	8.0	3.8	6.5
Gastro-enteritis and colitis, under 2, 571.0, 764	11	6	5	4.2	4.6	1.9
Cirrhosis of liver, 581	10	9	1	3.8	4.6	3.4
Diseases of pregnancy and childbirth, 640- 689	9	3	6	12.2	18.5	20.2
Sepsis of pregnancy and childbirth, 640- 641, 645.1, 651, 681, 682, 684	3	1	2	4.1	6.6	2.7
Congenital malforma- tions, 750-759	23	19	4	3.2	4.1	***
Accidental deaths, total, 800-962	182	112	70	69.1	60.3	79.8
Motor vehicle acci- dents, 810-835, 960	79	50	29	30.0	23.4	29.2
All other defined causes	427	242	185	162.1	200.4	229.9
Ill-defined and un- known causes, 780- 793, 795	161	53	108	61.1	62.6	72.5

*Birth and death rates per 1,000 population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births. All rates are based upon the December report of the years specified.

**Not available or not comparable.

***Included in "All other defined causes."

†Excluding Hodgkin's disease (201), leukemia, aleukemia (204) and mycosis fungoides (205).

Health Councils—One of the brightest indications of progress in securing more doctors and better health facilities for rural areas is the announcement by the American Medical Association that community health councils in the nation have increased from 82 to nearly 300 in the last two years.

These figures are based on a recent survey of the association's Council on Medical Service in which county medical societies were queried, Thomas A. Hendricks of Chicago, secretary of the council, said.

Local achievements of the community health councils in the last five years include construction of hospitals with the aid of the Hospital Survey and Construction Act (Hill-Burton Act); increasing available hospital beds; developing clinics; securing more doctors, dentists, nurses and other needed personnel; development of full-time local public health services; health examination of children of school and pre-school age and correction of their remediable health defects; promotion of voluntary prepayment medical care and hospitalization; provision of medical care for the aged and chronically ill, and meeting costs of medical service to families unable to pay for hospitalization and doctors' bills, according to Mr. Hendricks.

Some community councils have been extremely helpful in cooperating with the national mental health program. Councils have matched government funds to pay mental health clinic personnel and conducted educational campaigns to acquaint communities with the value and manner of operation of the clinics.

Although health councils have been organized in urban as well as in rural areas, they have been especially important in bringing better medical care to the people of rural communities.

The A. M. A.'s efforts to promote organization of community health councils to improve medical care for rural communities date back to the organization of the association's Committee on Rural Health five years ago. Since that time it has been actively engaged in coordinating the efforts of farm groups and state and local medical societies in rural health.

The committee is set up so that its representatives can be reached locally in any area. Doctors selected by state medical societies serve as directors in nine regions and as state rural health chairmen in 45 states. Any organization wanting information on setting up a local health council or solving rural health problems may contact one of these representatives or write directly to the A. M. A. Rural Health Committee in Chicago.

Dr. F. S. Crockett of Lafayette, Ind., is chairman of the Rural Health Committee, and a sub-committee of four doctors forms the executive body. Representatives of the American Farm Bureau Federation, the Grange, the Farm Foundation and other farm organizations make up an advisory committee.

That the rural health problem is steadily being solved through cooperative community efforts was generally agreed at the recent fifth annual Conference on Rural Health in Kansas City, Mo.

BOOK ABSTRACTS AND REVIEWS

From The Hills. An Autobiography of a Pediatrician. By John Zahorsky, M. D. Cloth. Price, \$4.00. Pp. 388. St. Louis: C. V. Mosby Company, 1949.

The career of this man of medicine with the American name of John and the Hungarian name of Zahorsky strangely parallels that of another Hungarian who made a name for himself in American medicine. Like Joseph Goldberger, Dr. Zahorsky came to this country as a young child. Like him, he knew hard living in a large American city—Cleveland, not New York. Like the man whose name is associated with one of the most important vitamins, he came close to serving with the armed forces in the Spanish-American War, but didn't. Like Goldberger, he won numerous honors from his fellow-physicians. But, unlike the other Hungarian-American, he is still living.

Dr. Zahorsky, whose father was also named John or possibly the Hungarian equivalent of it, seemed about to lose his mother on the trip across in 1872. She became so sick that even the captain of the ship became concerned over the condition of the woman in the steerage. So concerned was he indeed that he told her she was risking her life by insisting upon breast-feeding her baby. But that American-bound Hungarian mother felt a greater duty to the child than to herself. So she refused to trust his fate to any of the crude formulas available in mid-Atlantic in the early 1870's. And she came through the ordeal with a clear conscience and unimpaired health.

The family spent about six years in Cleveland. Then the father yielded to the call of the land and bought a farm in the Ozark country of Missouri. There the child became a youth. There, or rather near there, he attended the Steelville Normal and Business Institute.

Picking medicine as a career, John Zahorsky began the long (even then) quest for a medical degree, winning it in 1895. Then followed the "starvation period," much more familiar to beginning physicians of the 1890's than to those of the present time. He found plenty of practice in the St. Louis of that day, but not enough could be collected to keep financial distress more than arm's length away. But gradually he began winning patients with both the inclination and ability to pay. And rising professional prominence accompanied his improving fortunes. He developed an interest in medical writing and in time turned out a large volume of papers on many aspects of his work. He became a member of the editorial staff of the St. Louis Courier of Medicine and, after a brief apprenticeship, its editor. When that publication merged with the Interstate Medical Journal, he assumed editorial responsibility for the combined journals. He

found time to write a medical textbook (Synopsis of Pediatrics), which proved successful, and a treatise on pediatric nursing, which wasn't. (He attributes its rather cool reception by nurses to the feeling among them that a work on that subject should be written by a nurse, not a physician.) Meanwhile, he developed an excellent pediatric practice, such a good one, in fact, that he almost lost his health looking after it. Much of his unneeded income went into real estate, both urban and rural.

The depression hit him hard, however. The St. Louis buildings that had been kept tenanted so easily at excellent rents became expensive white elephants. His farm properties met the fate of farm properties everywhere. To make matters worse for him and other pediatricians, having a baby became too expensive a luxury for the depression-poor, and the increasing knowledge of birth control made it possible for couples who didn't want to bring babies into a depression-torn world to avoid doing so. The result: Fewer babies and less practice for baby doctors.

But Dr. Zahorsky was not ruined. He kept much of his physical property. His income did not drop too low to drive him to desperation. And he retained a happy, philosophical outlook upon life and its problems and puzzlements.

This is a story of one man's success in a highly competitive medical specialty. It is also a success story of another kind. It is a story of one who has done much for his fellow-man.

John M. Gibson.

Human Growth. By Lester F. Beck, Ph. D., Associate Professor of Psychology, University of Oregon. Cloth. Price, \$2.00. Pp. 124. New York: Harcourt, Brace and Company, 1949.

The teaching of sex has long been a troublesome problem for school people, parents and others. What to tell information-hungry youngsters, how to tell the simple story of life's everyday miracles of birth, and how to develop a healthy interest in this subject without skirting vulgarity—these have long ranked among the major questions of education and the family.

It would be too much to say that Human Growth has provided the complete answer to these and other bothersome matters of that kind. But it certainly provides parents and teachers—and anyone else wrestling with that problem—with a powerful ally.

Human Growth is a product of our modern age of frankness and honesty in sex matters. It assumes that alert youngsters stop accepting the stork theory of childbirth at an early age. And it proceeds on the intelligent theory that they know a great deal more about sex matters than their parents and grandparents did at a much later age.

Dr. Beck freely acknowledges his indebtedness to Margie Robinson, M. A. for assistance in the writing of this handy, informative little volume. Presumably, this means that he gathered the facts and she either did the writing or went over his manuscript with a critical red pencil. Whether that be true or not, one or both of them have done a good job of presenting helpful facts attractively. There is nothing bookish or encyclopedic about *Human Growth*.

Each section—or chapter, if you prefer—contains a general discussion of a particular phase of the general subject, followed by a series of questions and answers. The range within a single chapter is quite broad, too. For example: "If babies and small children don't smell of perspiration, why do those who are older?" "Why do people have hair on their bodies?" "Why do so many junior-high-school boys and girls have pimples on their faces?" "Why can't newborn babies see very well?"

The chapter headings are also pretty revelatory of the breadth of the field covered: "Growing . . . Growing . . . Grown"; "About Ourselves and Our Cells"; "Preview of Parenthood"; "The Miracle of Birth."

That last chapter tells in a man-to-man fashion how that miracle occurs. It starts with the newly fertilized ovum. It tells how it imbeds itself in the rich inner lining of the uterus. It describes its growth during the next nine months. And it tells what happens at birth.

Comparatively small as the volume is, it is complete, even containing a glossary. In that, key words used in the work proper, starting (alphabetically) with abdomen and ending with womb, are defined for the benefit of those whose knowledge may be deficient.

There have been many books having the same aim this one has. But it appears to hit its target much better than at least most of the others. *Human Growth* is a valuable addition to the library of sex education.

John M. Gibson.

Essentials of Obstetrical and Gynecological Pathology. By Robert L. Faulkner, M. D., F. A. C. S., Cleveland. Assistant Professor of Gynecology, Western Reserve Medical School; Associate Gynecologist, University Hospitals of Cleveland; and Marion Douglass, M. D., Cleveland. Formerly Assistant Professor of Gynecology, Western Reserve Medical School. Cloth. Price, \$8.75. Pp. 357, with 300 illustrations, 3 in color. Second edition. St. Louis: C. V. Mosby Co., 1950.

This is the second edition of a text which was first published in 1938. At that time, it was well received and it deserved its good reception. It is written by two authors who are well versed in the pathology of the female organs; and, equally as significant, the two authors are clinicians. They have both been connected with the gynecology department at Western Reserve Medical School.

The book is well written. The first chapter explains the proper method of handling and fix-

ing surgical specimens. The second is devoted to elementary histology of various types of epithelium. In subsequent chapters, the various lesions of all the female pelvic organs are described. One chapter each is devoted to the vulva, vagina, cervix, endometrium, myometrium, fallopian tube, and ovary. There is one chapter on endometriosis and one on pregnancy.

The book is written in a simple style and is easily readable. The illustrations, both gross and microscopic, are excellent. The gross and microscopic descriptions are good and well correlated with the illustrations. In an effort to demonstrate and explain the significance of pelvic pathology, this book is a definite success. It is well worth the price and can be of definite value to any physician who treats female patients.

Joe W. Perry, M. D.

Operations of General Surgery. By Thomas G. Orr, M. D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas. Second edition. Cloth. Price, \$13.50. Pp. 890, with 1,700 step-by-step illustrations on 721 figures. Philadelphia and London: W. B. Saunders Company, 1949.

The author has arranged his material so that the different systems of the body are dealt with from a surgical point of view. This makes the book much more readable, and reference to a particular operative method is made easier than when broad phases of surgery are grouped together. A brief anatomic description of the regions as they occur is given. Indications for different operative procedures are discussed, as well as certain safeguards as they apply to the subject. The chief value of the book seems, to the reviewer, to be the very excellent illustrations. The different steps in various operative procedures are beautifully and progressively shown by means of these illustrations. This second edition includes a very valuable chapter on abdominal incisions.

The relatively new operative procedures of pancreaticoduodenectomy and those dealing with anomalies of the aortic arch are included. A very definite effort has been made to bring the book up to the present from all points of view. The chapter on surgery of the thorax seems particularly valuable.

The reviewer feels that this is one of the better books for the general surgeon.

John L. Branch, M. D.

Diseases of the Foot. By Emil D. W. Hauser, M. S., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School. New, second edition. Cloth. Price, \$7.50. Pp. 415, with 195 figures. Philadelphia and London: W. B. Saunders Company, 1950.

The first two chapters deal with the anatomy and the physiology of the foot. This seems quite appropriate and these chapters are well written. The author has included an excellent chapter on pes valgoplanus and places great stress on the corrective type of treatment for this condition.

His method of applying the corrective additions to the shoe is described in detail. The commercial type of arch support is condemned, as well as the so-called arch supporter shoes, in which a rigid support is built into the shoe. His reasons for this attitude are well presented. Congenital pes valgoplanus is discussed and he advises the institution of early treatment, preferably with cohesive bandaging. The method of strapping is discussed in detail.

Several operative technics for the correction of hallux valgus are included. A separate chapter on orthopedic conditions of the accessory bones of the foot is of distinct value. It is not unusual for the presence of such bones to be rather confusing, and a discussion of their importance is helpful.

The treatment of club foot is discussed in some detail, and here again the author advises the

early institution of treatment. The cohesive bandage technic until the walking period is advised by the author. The method of applying the bandage is discussed in some detail. Fractures and dislocations of the foot and ankle are rather sketchily covered but it seems that the author did not intend to include these conditions in any great detail. The chapter on circulatory disturbances includes a routine for the treatment of thrombophlebitis by the anticoagulants. He advises the administration of penicillin during the treatment of an infected thrombus because of the fact that bacteria are released into the blood stream.

The reviewer considers the book of definite value to those treating the various foot conditions which one encounters in general practice and general surgery.

John L. Branch, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

SURVEY OF PHYSICIANS' INCOMES

Late in April the Bureau of Medical Economic Research of the American Medical Association and the Office of Business Economics of the U. S. Department of Commerce will jointly conduct a survey of physicians' incomes.

The Bureau has been authorized by the A. M. A. Board of Trustees to cooperate in this survey, which the Department of Commerce had planned to conduct alone. It will be the first full-scale survey by the department of physicians' incomes since 1941.

An analysis of the results will be published by the Department of Commerce next fall in its monthly publication, "Survey of Current Business." Its August 1949 and January 1950 issues had published similar analyses of surveys of incomes of dentists and lawyers, respectively, made jointly with the American Dental Association and the American Bar Association.

There is evidence that the national averages in some surveys have been too high because physicians who do not have bookkeepers to fill out questionnaires do not reply in sufficient numbers. Accordingly, the Bureau emphasizes the importance of all doctors, especially those with a relatively small practice, filling out the questionnaires.

Accurate postwar data on physicians' incomes are badly needed in order to develop

better estimates of how much the American people pay to physicians.

Every physician can be assured that the survey has no relation whatever to the operations of the U. S. Bureau of Internal Revenue. There is no way by which the Department of Commerce could have obtained the needed information from the Bureau of Internal Revenue; hence, the questionnaire survey.

There will be two questionnaire forms. The Bureau of Medical Economic Research helped to design these. A short form will request income data for 1949 only. A long form questionnaire will cover the years 1945 through 1949. All are to be returned unsigned in franked envelopes.

The punch card files of the Bureau of Medical Economic Research contain the names of about 200,000 physicians. The survey will cover 125,000 of these, or 62½ per cent of the total. Selection will be by a formula which eliminates any partiality.

A short form will be sent once only to every other name in the file. Of the remaining 100,000 names, every fourth will be selected. To these will go 10,000 short forms and 15,000 long forms, with this distinction—the return franked envelopes will carry a code number which will identify the physician to the Bureau of Medical Economic Research alone. All of the addressing will be done in the headquarters of the A. M. A.

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Miscellany

FIND RICE DIET FAILS TO REDUCE BLOOD PRESSURE

The rice diet did not effect any significant reduction in blood pressure during a trial on 12 patients, according to a report by a group of New York doctors.

The doctors are Herbert Chasis, William Goldring, Ernest S. Breed, George E. Schreiner and Alfred A. Bolomey, of the New York University College of Medicine. Their report appears in a recent issue of the Journal of the American Medical Association.

Twelve patients with essential hypertension were selected from the Hypertension and Nephritis Clinic of the New York University Clinic and from the Third Medical Division of Bellevue Hospital, the doctors say.

These patients were maintained on a balanced diet for 14 to 79 days to stabilize their blood pressures. They were then placed on the rice diet for 14 to 98 days. Observations of four patients were continued during a second period on the balanced diet after discontinuance of the rice diet.

"The changes in blood pressure observed in these patients did not exceed the random, spontaneous variations to be anticipated from the control data on these patients and from the variations in pressure observed in other patients kept in the hospital under similar conditions without restriction of diet," the doctors point out.

During the latter part of the rice diet period, five patients were given daily doses of sodium chloride.

"A prompt and significant increase in pressures occurred in four of the five patients," the doctors say, adding:

"Although the cause for this rise in blood pressure is unknown, the phenomenon suggests that salt restriction may be more important than dietary restriction in effecting such reductions in blood pressure as have been reported by others on the low salt, rice diet."

Tuberculosis control does not begin at the door of the sanatorium nor does it end there. After the patient has been returned to his community, many agencies—the tuberculosis association, the health department, the local welfare agency—all work together with him to get him back on his feet and to keep him there.—R. D. Thompson, *M. D., Bull., Nat. Tuberc. A., Oct. 1949.*



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M. J. L. Hoye, M. D., Superintendent
Fellow of the American Psychiatric Association.

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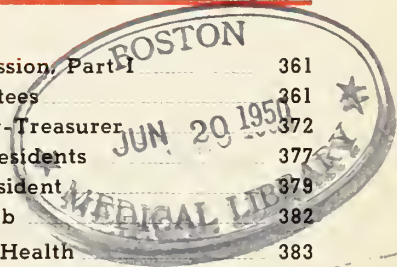
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"THE THIRD ERA" OF BILIARY TRACT SURGERY

SAMUEL W. WINDHAM, M. D.
Frasier-Ellis Hospital
Dothan, Alabama

In 1938 Lahey suggested that surgery of the biliary tract could be roughly broken down into three definite eras. These eras could be defined by trends in surgery performed on the biliary tract during the periods. Roughly, the first era consisted of a time from the beginning of gallbladder surgery up to the early 1920's, during which cholecystostomy was the operation of choice. This first era was followed by a second, during which cholecystostomy lost favor and cholecystectomy became the principal surgical procedure performed on the biliary system. Because of relatively poor results in a large percentage of patients, Lahey, Walters, Cutler and Zollinger, Heuer and others began to study this problem and it soon became apparent that cholecystectomy was inadequate and incomplete for the correction of diseases of the system in many of the patients on whom the operation was being performed. Thus began the third era of surgery on the biliary tract. This era has been characterized by a more thorough understanding of the physiology and pathology of the system and a more vigorous attempt at correcting defects in people with disease involving it. A definite syndrome, commonly referred to as the "post-cholecystectomy syndrome," has taken its rightful place in surgical literature.

Through the study of patients with symptoms following biliary tract surgery, we are beginning to understand more and more what the original operator owes his patient in the form of surgical operations performed as first procedure in order that he might, in more instances, eradicate the disease and symptom complex by a single operation. The surgical approach to the "post-cholecystectomy syndrome" is suggesting a fourth era in biliary tract surgery. Grimson, Womack, and DeTakets have introduced a neurologic element into the surgery of painful conditions following what is considered adequate surgery for the pathology in this system. This will be referred to again.

Anatomic abnormalities, congenital defects, and diagnostic procedures used in arriving at a diagnosis of biliary tract disease will not be discussed. Tumors and strictures of the common duct will also be excluded. An effort will be made to present a practicable, usable approach to the common surgical conditions involving this system and the opinions expressed correlated with reports in surgical literature from some of the leading medical centers. We, who probably should be classed as occasional operators, must constantly be on the alert to keep abreast of the works of those who do large amounts of surgery in the fields of our special interest. It is for this reason that I bring this presentation to you.

I thought we had become proficient enough to select a few individual tests for use as differential diagnostic procedures but, because of frequent mistakes using this restricted study, the profile was reestablished. I am not suggesting the use of laboratory procedures as a substitute for adequate history and physical examinations of the patient. These are supplemental studies but, to me, they are necessary in the more complex situations in order to arrive at a correct diagnosis. Chart 1 is a typical example of a "Liver Profile" performed on a patient with obstructive jaundice. You will notice that this chart does not include the thymol turbidity or flocculation test. These have now been added and are considered among our best liver function studies. This profile was suggested by Watson and has recently been modified, based upon recent information pertaining to liver function. Basically, however, it is still a useful guide. I shall point out only the characteristic findings in obstructive jaundice. They are a relatively normal total protein with a normal albumin globulin ratio, a negative to one plus cephalin cholesterol flocculation and/or thymol turbidity test, an elevated total cholesterol, a depressed prothrombin time, which responds promptly and adequately to the administration of vitamin K (commonly called the prothrombin response), an essentially normal urine urobilinogen and feces urobilinogen, and a large amount of immediate reacting serum bilirubin. Bromsulphalein, as routinely performed, cannot be used in the jaundiced patient because of the cholemic serum. A specially performed bromsulphalein test as performed by Mater et al. can be used in cholemic individuals. In the non-jaundiced patient it is one of the most reliable liver function studies. Presented with the patient whose liver function studies follow the suggested pattern above and in whom the history and physical findings are compatible with suspected biliary tract disease, the surgeon can feel safe in operating on the patient. This appears to be a complicated approach to the diagnosis in patients who, in many instances, appear to have classical disease, but when this approach is adhered to completely there will be fewer mistakes made in correct diagnosis.

The common biliary tract diseases which we see daily are acute cholecystitis, chronic

cholecystitis with and without stones, and chronic cholecystitis and cholelithiasis with stones in the common duct, associated with or without an accompanying cholangitis, and the post-cholecystectomy syndrome. These are the conditions which we are primarily interested in today.

During the period 1935-1940 surgical literature was filled with arguments for and against early or delayed treatment of acute cholecystitis. I believe that the profession is more generally agreed today that the best treatment for this disease is immediate surgery. Heuer was one of the first advocates of this type treatment. He pointed out the high percentage of gangrene and perforation in acute disease of the gallbladder. With this, the conservative school would not at first agree. Its adherents also went further and stated that if perforations occurred they were localized and did not enhance, to a great degree, the mortality of the surgery performed. As the profession became more aware of gallbladder perforations, the percentage in the various series studied began to show increases. The same change from localized perforations to free perforations into the peritoneal cavity was noted. The mortality rates of perforations vary from 5.8 per cent to 75 per cent depending on the statistics studied. All of us will agree that a perforated gallbladder is a near disaster and should be prevented if at all possible.

Chart 2 gives a partial review of series of patients showing the cases with perforation and the type of perforation present. From these studies it is evident that this catastrophe is not at all unusual. Chart 3 is a more complete study of the same condition. This illustrates that from 2.8 per cent to 12.1 per cent of cases with cholecystitis requiring surgery will have a perforated gallbladder. In acute cholecystitis the percentage of cases with perforation ranges from 7.1 per cent to 23.5 per cent. Early surgery is the only method whereby this catastrophe can be avoided.

In acute cholecystitis the degree of ischemia or edema depends on the location and relation of the cystic artery and vein to the segment of common duct or ampulla containing the stone. In at least 95 per cent of acute cholecystitis, stones are present. Due to previous disease and scarring in the gallbladder, it cannot enlarge and distend

CHART 2
INCIDENCE OF FREE AND LOCALIZED PERFORATIONS OF THE GALLBLADDER

Author	Year	Cases of Free Perforations		Cases of Perforations With Localization	
		Num-ber	Per-centage	Num-ber	Per-centage
Niemeier, O. W.: Ann. Surg. 99: 922 (June) 1934	1934	2	25.0	6	75.0
Sanders	1937	4	8.6	42	91.0
Pennoyer, G. P.: Ann. Surg. 107: 543 (April) 1938	1938	7	-----	-----	-----
Stone, W. W., and Douglas, F. M.: Am. J. Surg. 45: 301 (Aug.) 1939	1939	6	35.0	11	64.7
Hotz	1939	53	76.7	16	23.1
Atlee, J. L., and Atlee, J. L., Jr.: Pennsylvania M. J. 44: 731 (March) 1941	1940	4	26.6	11	73.3
Glenn, F., and Moore, S. W.: Arch. Surg. 44: 677 (April) 1942	1942	3	12.0	22	88.0
Schaeffer	1942	14	70.0	6	30.0
Cowley and Harkins	1943	6	24.0	19	76.0
Johnstone & Ostendorph*	1944	14	42.4	19	57.6
Total or average		113		152	

*Total cases of perforated gallbladder—32. Of these, there were 14 cases of free perforation of the gallbladder with generalized peritonitis and 19 cases of localized perforation, 1 case revealing both a free and a localized perforation.

CHART 3
INCIDENCE OF PERFORATED GALLBLADDERS IN THE LITERATURE

Author	Total Gallbladder Cases Reviewed	No. of Cases With Acute Cholecystitis	Number of Perforated Cases	% of Total Cases Perforated	% of Acute Cases Perforated	Mortality Perforated Cases
Blalock, 1924	735	-----	21	2.9	-----	-----
Fifield, 1928	1,066	-----	28	2.6	-----	43.0
Mitchell, 1928	1,270	-----	16	1.2	-----	-----
Heuer, 1934	800	106	23	2.8	21.0	34.7
Eliason & McLaughlin, 1934	490	-----	9	1.8	-----	11.0
Heyd, 1935	489	-----	6	1.2	-----	16.6
D'Abreu, 1935	116	-----	3	2.6	-----	66.6
Mentzer, 1936	149	51	18	12.1	23.5	27.7
Sanders, 1937	886	-----	46	5.2	-----	17.4
Hotz, 1939	-----	574	69	-----	12.1	26.1
Stone and Douglas, 1939	775	170	17	2.0	10.0	5.8
Glenn, 1939	-----	219	18	-----	7.7	11.1
Atlee and Atlee, 1940	-----	193	16	-----	7.7	18.8
McCloskey & Lehman, 1940	-----	68	12	-----	17.6	16.6
Edwards, Gerwig & Guyton, 1941	1,124	194	21	1.8	10.8	28.5
Wallace & Allen, 1941	2,273	415	64	2.8	15.4	17.2
Glenn & Moore, 1942	-----	350	25	-----	7.1	12.0
McLanahan, Trout & Weary, 1942	-----	140	14	-----	10.0	42.8
Cowley and Harkins, 1943	2,742	-----	25	0.9	-----	24.0
Johnstone & Ostendorph, 1946*	-----	105	3	2.8	-----	-----
Total or average	12,915	2,366	436	3.0	13.0	20.8

*12,000 consecutive autopsies showed 43 cases of perforated gallbladders, 14 (43%) of which were into the general peritoneal cavity.

as normally. The edema adds to the obstruction of the venous return from the gallbladder resulting in a venous thrombosis. The interference with the blood supply results in gangrene, which is followed by perforation. The presence of cystic veins is a rather new concept, but Glenn has definitely demonstrated their presence and has demonstrated in pathologic specimens thrombosis involving these veins.

In experienced hands, the mortality rate of acute cholecystitis treated by early surgery is relatively low. There, however, is a definite difference in age groups. The mortality rate in patients of less than fifty years of age is approximately two per cent, whereas, in patients over fifty years of age, the rate is approximately six per cent. It is necessary, therefore, that chronic cholecystitis, which is in most instances the forerunner of

acute disease, be correctly and adequately treated prior to the onset of the acute complication. Recently, Comfort et al. studied a relatively large series of cases in which so-called silent gall stones were present. Their conclusion as to treatment was rather indefinite, but I agree with Walters, Lahey, and others who think that all biliary tract calculi should be removed. This attitude has developed because of the frequency of occurrence of complications in patients who have so-called silent gall stones. These complications include acute cholecystitis, a higher percentage of choledocholithiasis, chronic hepatic disease, and chronic pancreatitis.

In the intelligent handling of patients with acute cholecystitis, the body fluids, glycogen and protein stores in the liver, and blood chemistry changes should be corrected prior to the patient's going to the operating room. In most instances this requires some 12 to 48 hours. To me, therefore, early surgery means surgery within 48 hours. In our locality it is, at times, difficult to follow this surgical axiom in that the patients get into the hands of the surgeons after this period has passed. This attitude to treatment can

be carried out within the first 4 days of the disease, but the period of 4 to 12 days following the onset of the acute illness is definitely a danger period as far as surgery is concerned because of the increase in technical difficulties encountered at operation during this period. If the patient arrives during the danger period, it is well to delay operation until this period is over, if at all possible, being aware that there are no reliable criteria to indicate the progress of the pathologic process in acute cholecystitis. The temperature, blood count and physical findings may be relatively normal and yet gangrene of the gallbladder may be present.

Cholecystectomy is the operation of choice in acute cholecystitis; however, there are certain contraindications to this procedure. They are: the presence of peritonitis due to gallbladder perforation (however, a localized abscess or localized peritonitis is not a contraindication); the presence of pathologic conditions in which great difficulty is experienced in identifying the important structures of the hepatic triad; the presence of severe jaundice caused by obstruction in the common duct contraindicating an exten-

CHART 4
SYMPTOMS AND PHYSICAL FINDINGS IN COMMON DUCT STONES

Surgeon	Jaundice Past or Present	Colic	Chills and Fever
Walters	Jaundice in 20%	85%	None in 63%
Lahey	Jaundice in 39%	90%
Zollinger	Jaundice in 20%	80%	None in 67%
Adams	Jaundice in 18%	93%	Unreliable symptom

CHART 5
INCIDENCE OF COMMON DUCT STONES

Surgeon or Group	Year	Number of Biliary Tract Operations	Number and Percentage of Common Ducts Explored	Number and Percentage of Positive Common Duct Explorations
Walters *1	1938		(22%)	(13%)
Heyd	1938		(20%)	(12%)
Bancroft *2	1940			(11%)
Cutter and Zollinger	1940		(38%)	(18%)
Lahey *3	1943		(40%)	(18%)
New York Hospital Group *4 ..	1932-46	2500	302 (12%)	135 (44.7%)
University of Michigan Hospital	1934-46	1596	439 (21%)	190 (43%)
Mayo Clinic Group	1947	1172	396 (25%)	126 (42.6%)
Lahey Clinic Group *5	1947	1104	504 (45%)	186 (36.9%)

*1 8% of the positive explorations of the common duct had no stones in the gallbladder.
*2 In acute cholecystitis, 15.3% had common duct stones.
*3 4% of positive explorations had no stones in the gallbladder.
*4 32% under 50 years with 40% total cases below that age.
68% over 50 years with 60% total cases below that age.
Recurred or overlooked in 12.8% cases.
*5 Mortality of primary operations was 2.7% and for secondary operations 11.1%.
37% of ducts explored contained stones.

sive operative procedure on the patient; and in the patient who is so severely ill he cannot withstand a long operation or anesthesia. In these cases cholecystostomy should be performed but the operator should be sure that the biliary tract is decompressed by this procedure. If cholecystostomy is done, the patient should be instructed to return at a later date for surgical correction of his biliary tract disease.

Because of the frequency of post-cholecystectomy complaints, surgeons with investigative minds turned their attention to the causes producing these persistent symptoms. It was quickly recognized that the overlooked stone or stones in the common duct and/or the hepatic ducts comprised one of the principal reasons for these complaints.

Only one symptom is relatively characteristic of common duct stone. This is colic. Chart 4 shows colic to have been present in a minimum of 85 per cent to a maximum of 93 per cent of cases studied by the authors. Jaundice is also no specific criterion for common duct pathology as it was present at the time of surgery in only 18 to 20 per cent of cases. Adams found that approximately 50 per cent of patients with common duct stones gave a history of jaundice, whereas approximately 50 per cent of patients with a history of jaundice did not have stones in the duct. Therefore, the history cannot be relied upon in determining preoperatively whether or not the ducts must be explored.

Chart 5 indicates the incidence of common duct stone in series reported in the literature. It will be noted that the incidence of stones found in the common duct as reported by the New York Hospital group, the University of Michigan group, the Mayo Clinic, and the Lahey Clinic groups, ranges from 12 to 45 per cent. It is also to be noted that, in finding these common duct stones, many negative explorations were performed. The more aggressive the group, the larger the percentage of negative explorations; however, the aggressive group also found the large percentage of stones. This was indicated by the percentages of approximately 37 per cent for the group who explored 45 per cent of the common ducts to 44 per cent positive explorations in exploring 12 per cent of common ducts at the

time of the usual gallbladder surgery. Interestingly enough, stones in the gallbladder are not necessarily present in cases in which stones are found in the common duct. Of interest is Lahey's 4 per cent of positive explorations of the common duct of patients who have no stones present in the gallbladder. Walters in his series found 8 per cent of positive explorations of the common duct to have no stones in the gallbladder. In a patient with a history and physical examination suggesting biliary tract disease, the common duct must be investigated, even though there are no stones in the gallbladder, before a clean biliary tract bill of health can be given the patient. In the New York Hospital group statistics, 32 per cent of patients with biliary tract disease were under 50 years of age and 40 per cent of the positive explorations were in this age group. Sixty per cent of the total positive explorations were in patients above the age of 50 years; whereas 68 per cent of the patients having biliary tract disease belong to this age group. In Bancroft's series of acute cholecystitis, 15.3 per cent had stones in the common duct. Because of these high incidences of common duct stone, all patients being subjected to biliary tract surgery should be candidates for common duct exploration. Patients treated by a group such as this assembled today should be informed along these lines and no doctor should operate on the biliary tract who does not have the facilities to perform and the surgical experience necessary to carry out common duct exploration completely. The mortality rate of primary operation in the series referred to above was 2.7 per cent in primary operations, whereas, in secondary operations on patients in whom stones had been overlooked or other complications followed the primary operation, the mortality rate was increased to approximately 11 per cent. It behooves all of us who operate on patients with biliary tract disease to do a thorough and complete operation during the first session of surgery. As pointed out above, certain patients with acute biliary tract disease, specifically acute cholecystitis, cannot have complete surgery performed. In these patients a minimum amount is done with the definite idea of performing the definitive surgery at a later date. Only under these

conditions can we expect satisfactory results and a low mortality rate in biliary tract surgery.

CHART 6
INDICATIONS FOR EXPLORATION OF COMMON DUCT

Clinical History

1. History or presence of jaundice and/or presence of laboratory signs thereof.
2. Cholangitis associated with cholelithiasis.
3. Recurrent symptoms after cholecystectomy.
4. Frequent attacks of gall stone colic.
5. Pronounced involuntary vomiting.

Findings at Operation

6. Suspicion of stone by palpation.
7. Dilated or thickened common duct.
8. Contracted, thickened gallbladder.
9. Dilated cystic duct.
10. Appearance of bile by aspiration.
11. Thickening of head of pancreas and/or hepatitis.
12. Many small stones in gallbladder and cystic duct.
13. Non-calculous gallbladder found at operation in a patient with biliary tract symptoms.

Considering that the above statements are true, what then are the indications for exploration of the common duct? Chart 6 lists these indications. In the history, jaundice either at present or in the past and/or the presence of laboratory signs thereof constitute one of the most important symptoms. The presence of jaundice more than three months prior to the time of surgery is usually of little significance, for rarely will patients with common duct stones which produce jaundice go for more than three months without an attack associated with this symptom. Parenchymal liver disease will, of course, cause jaundice but these attacks are usually of long duration and may be separated by great intervals. The laboratory investigation usually indicates the presence of a parenchymal hepatic disease sufficient enough to produce this physical finding. Recurrent symptoms after cholecystectomy is a prime reason for common duct exploration. As pointed out above, unless the patient had a common duct exploration and a free duct demonstrated, as will be discussed later, they have at least a 25 per cent chance of having stones in the common duct. Thus, symptoms similar to the preoperative complaints in the post-cholecystectomy period is a definite indication for common duct exploration. Colic, as mentioned above, is the most frequent and persistent complaint of patients with stones in the common duct. Zollinger, by intubating the common duct at the time of surgery

and distending the common duct during the postoperative period, found from his studies that pronounced involuntary vomiting in patients with biliary tract disease was present only in patients with cystic duct or common duct obstruction. Thus, a patient with no evidence of cystic duct obstruction and in whom involuntary vomiting is frequent should be suspected of having a common duct stone. During the operative procedure, the common duct is always palpated and when a suspicion of stone is found on palpation the duct must be explored. If the extra-hepatic biliary tract is dilated or the common duct is thickened, the duct should be explored. The contracted, thick-walled gallbladder is also an indication for common duct exploration, but Buxton has demonstrated the fallacy of regarding this as a specific indication for common duct surgery. In the presence of a dilated cystic duct, especially if there are many small stones in the gallbladder and/or the cystic duct, the common duct must be explored. Lahey places great stress on the physical appearance of bile aspirated from the common duct during surgery. He points out that if cloudy or "sandy" bile is aspirated, it is a definite indication for a common duct exploration. Because of the association of pancreatic disease with disease of the biliary tract, a thickening or induration of the head of the pancreas is a definite reason for common duct exploration. As pointed out above in large series such as those of Lahey and Walters, the presence of no stone in the gallbladder is no reason why the common duct should not be explored. As a matter of fact, in patients with history and physical findings characteristic of biliary tract disease, the absence of stones in the gallbladder makes it almost mandatory that an investigation of the common bile duct be made as up to 8 per cent of the patients reported have common duct stones when no stones are present in the gallbladder.

It was stated above that in certain instances the common bile duct should be investigated. Recently a reemphasis on immediate cholangiography is being made in many of the best medical centers. This procedure is simple to perform, requires only a small amount of time, and is very informative. In cases where there is no absolute indication for common duct ex-

ploration and in whom a negative immediate cholangiogram is obtained at the operating table, they can be adequately treated by cholecystectomy without common duct exploration. Details of immediate cholangiography will be omitted from this discussion but references to Mixture et al., Partington and others, and Best gives adequate description of technique and discussion of this procedure. In doubtful cases it is found to be well worth the surgeon's time. The immediate cholangiogram is extremely helpful in locating common duct stones and in making them easy to find and remove on exploration of the duct. The repeat cholangiogram, after the suspected stones have been removed, will show an empty and patent common duct. It cannot be considered infallible because globules of bile or small collections of blood may appear as stones, whereas small stones and bile sand may be overlooked. Mixture and others found that immediate cholangiography is reliable in approximately 95 per cent of instances. Where immediate cholangiography is to be employed, spinal anesthesia is unsatisfactory because of the associated paralysis of the sphincteric mechanism at the end of the common duct, making it near impossible to fill the common duct with dye.

When common duct exploration is carried out, postoperative complications are more frequent. In Buxton's series, approximately 15 per cent of patients had some type of postoperative complication. However, this is no excuse for incomplete surgery. Listed in Chart 7 are the complications most frequently found. The common complications of surgery, such as shock, pulmonary involvement, especially atelectasis, etc., are listed as complications of common duct exploration. Incidence of subphrenic and sub-

CHART 7
COMPLICATIONS OF COMMON DUCT EXPLORATION
AND/OR DRAINAGE

1. Shock.
2. Hepatic insufficiency.
3. Pulmonary complications—especially atelectasis.
4. Infections:
 - a. subphrenic abscess.
 - b. subhepatic abscess.
 - c. bile peritonitis.
5. Wound infections.
6. Postoperative bleeding.
7. Duodenal fistula.
8. Opening of ligated cystic duct.
9. Breaking T tube in its removal.
10. Stricture of common duct.
11. Increased morbidity and mortality.

hepatic abscesses and bile peritonitis are more frequent following common duct exploration than in simple cholecystectomy. Some of these complications can be prevented by meticulous surgery. When the common duct is sutured in a water tight fashion around the draining T-tube, this group of infectious complications is minimum. The same is true of an abnormally high wound infection. In the pre-vitamin K days, postoperative bleeding was a frequent and dangerous postoperative complication. This was due to deficiencies in blood prothrombin. By adequately correcting prothrombin deficiencies during the preoperative period, postoperative bleeding is now extremely rare. The prothrombin time can best be corrected by repeated blood transfusions and adequate vitamin K administration. Duodenal fistula is an infrequent complication secondary to manipulation in the region of the ampulla and first portion of the duodenum in performing common duct exploration and common duct drainage. In common duct exploration, as in cholecystectomy, if a simple ligature is

CHART 8
CHEMISTRY OF BILE DRAINAGE AFTER BILIARY TRACT OBSTRUCTION

				Bile Salts MG/100	Pigment MG/100		Choles- terol			
Date	Volume	Description	PH	CC.	Total	CC.	Total			Total
1-11-40	600	dark reddish brown; ppt.	6.5	less than 100		250		16.6		
1-13-40	450	dark brown; precipitate	6.5	less than 100		241		9.15		
1-15-48	800	dark brown; precipitate	6.5	less than 100		120		11.8		
1-17-40	900	yellow-brown; cloudy	6.5	faint trace		57.6		30.0		
1-19-40	1000	light greenish-brown; cloudy	6.5	450	4500	33.0	330	45.6		456
1-21-40	1000	greenish-brown; ppt.	6.5	571	5710	26.4	264	34.9		349

placed on the cystic duct it may slip from the duct and result in leakage. Suture ligation of the cystic duct is the safe procedure. Hepatic insufficiency secondary to rapid drainage of the obstructed liver is a definite possibility but fortunately a relatively rare complication. A study of the chemistry of the drained bile definitely indicates there is a temporary postoperative shut down of bile excretion in both quantity and chemical constituents of the bile. Chart 8 demonstrates this significant finding. In the common duct which has been drained by a T-tube, the T-tube is occasionally broken when it is removed. This would necessitate further surgery. Strictures of the common duct are usually secondary to abnormal operative trauma and rarely are the result of common duct exploration itself, either during the time of exploration or secondary to T-tube drainage. Thorough and meticulous surgery will, in most instances, avoid these complications.



Fig. 1

The above discussion relating to postoperative complications did not include the overlooked common duct stone. This, as stated previously, is one of the most frequent causes of the so-called post-cholecystectomy syndrome. When the common duct is



Fig. 2

drained, it is essential that a patent, pathology-free common duct be demonstrated prior to the removal of the common duct drain. This can be demonstrated by secondary cholangiography. Figures 1 and 2 demonstrate residual stones found during the immediate postoperative period. In Fig. 1 there is a round, almost completely occluded mass in the distal end of the common duct. In Fig. 2 there are three areas of increased radiability in the distal end of the common duct. Some of you may say that this cannot happen to you; however, in these cases the common ducts were greatly dilated, easily admitting the index finger. The finger was used to explore the common duct, and a 9¼ inch curved clamp was placed through the distal end of the common duct into the duodenum. These stones were not found in these manipulations. All reported series of patients undergoing postoperative investigation because of persistent symptoms showed a higher incidence of overlooked stones than in reports of biliary surgery relating to other conditions. The number of overlooked stones found will be in direct proportion to the amount of investigation directed to this end. Overlooked stones

can be avoided in most instances by immediate cholangiography.

In cases of overlooked common duct stones, there are two possible approaches to their treatment. One is based upon dissolution of the stones by some agent such as ether, nupercaine, and more recently Solution G. These agents are used in association with frequent irrigation and use of antispasmodics such as glyceryl trinitrate and the oral administration of choleretics. I tried one of these procedures on one occasion and in my hands it was not successful. The second method of approach is that of surgery. In patients whose common duct contains overlooked stones as demonstrated by the secondary cholangiogram, the drainage tube should not be removed. If the stone is proximal to the tube and the duct system is not draining well, and the patient is having symptoms such as chills and fever or other evidence of cholangiolitis, immediate exploration is necessary. If it is below the drainage tube and the patient is asymptomatic, it is best to wait until the patient's condition will permit re-operation. The wound should be allowed to heal completely and all evidence of an infection to clear. It should be remembered that secondary common duct exploration carries a much higher mortality rate than the primary operation and the patient should be given every chance to be in good condition before the secondary procedure is performed.

CHART 9

POST CHOLECYSTECTOMY SYNDROME

1. Irritable bowel and/or functional dyspepsia.
2. Remnant of gallbladder and/or cystic duct.
3. Adhesions of duodenum to gallbladder fossa.
4. Biliary dyskinesia.
5. Fibrosis of sphincter of Oddi.
6. Residual pancreatitis and hepatic disease.
7. Periductal scarring due to long biliary tract infection.
8. Common duct stones.
9. Benign stricture of common duct.
10. Diseases outside of the biliary tract for which the gallbladder should never have been removed.

Chart 9 lists the most frequent causes of post-cholecystectomy pain. Only a few of these will be specifically referred to. Remnants of the gallbladder and/or cystic duct are one of the unforgivable causes for such complaints. I believe this occurs because of the fear of the operating surgeon in getting

close to the common duct during the removal of the gallbladder. The literature is now replete with the case studies where this pathology is the cause of postoperative complaints. A clean, thorough primary operation will prevent this situation. Fibrosis of the sphincter of Oddi is secondary to a too vigorous dilatation of the sphincter at the time of primary surgery. Zollinger demonstrated clearly what happened to the biliary tree following vigorous dilatation. Common duct stones have been referred to previously. Strictures are secondary to traumatic injury of the common duct at operation and are thus avoidable. Recently Womack and Grimson have demonstrated procedures in which a neurogenic factor is the cause of postoperative complications. Grimson, in a preliminary report, directed attention to celiac ganglionectomy in patients who have persistent complaints. Womack has demonstrated neuronoma-like structures in the vicinity of the biliary tract and has advocated a neurologic approach to this problem. These are the factors which might be regarded as the beginning of a fourth era in biliary tract surgery. Other conditions in which gallbladder surgery should not be considered as a part of treatment may well be present. These include hepatic disease, irritable bowel and/or functional dyspepsia, and diseases outside of the biliary tract. Many of the patients with postoperative complaints belong to this group and should not have been operated on. In many instances, a more careful screening prior to surgery will prevent postoperative complaints.

SUMMARY

1. No personal series is reported in this discussion, but surgical literature based on large series of patients has been used to support concepts of treatment directed to the eradication of the common biliary tract diseases.

2. Acute cholecystitis should be operated on immediately and cholecystectomy is the operation of choice. Immediate operation is defined and the danger period discussed.

3. The incidence of common duct stone has been discussed.

4. Cholangiography as an aid in preventing the overlooked stone has been offered.

5. Treatment of the overlooked stone has been discussed.

6. Postoperative complications are listed and discussed.

7. A brief discussion of the "post-cholecystectomy syndrome" has been given.

8. It is the opinion of the author that biliary tract surgery is often taken too lightly and is often performed poorly and incompletely by doctors not trained well enough in the surgical diseases of the biliary tract and the procedures necessary to correct the diseases present.

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TREATMENT OF TUBERCULOUS MENINGITIS

REPORT OF TWO CASES

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Streptomycin has changed the outlook of the patient with tuberculous meningitis from despair to hopefulness. Until the advent of this antibiotic, five to seven weeks of life after early diagnosis were the most that could be expected. Today many lives are being prolonged and some completely salvaged.

Several reports of small series of cases describing methods of treatment have appeared. Perhaps the two most remarkable are those of Edith Lincoln¹ and Abraham Levinson.² The former reported seven cases in children treated with streptomycin intramuscularly and intrathecally and Promizole by mouth. Six patients were alive three to

eight months after initiation of therapy. All appeared mentally normal and there were no neurologic sequelae except mild strabismus in one and coarse tremors of the upper extremities in another. Levinson treated nineteen children with streptomycin intramuscularly. No intrathecal therapy was employed. Eight were alive three to fifteen months after onset of the disease.

My two cases are added to the stockpile of reports with the hope that the combined efforts of all who work with this disease may hasten the determination of its most effective treatment.

REPORT OF CASES

CASE 1

J. P., admitted to Decatur General Hospital, August 19, 1948; expired March 9, 1949. This 15-month old white male was admitted to the hospital with the chief complaint of fever and vomiting.

1. Lincoln, Edith M., et al.: Tuberculous Meningitis in Children, *J. A. M. A.* 136: 593-597 (Feb. 28) '48.

2. Levinson, Abraham: Streptomycin Therapy in Tuberculous Meningitis, *Am. J. Dis. Child.* 77: 709 (June) 1949.

Family history revealed that the mother and one older sibling were living and well. At the time the child was admitted the father was in a sanatorium with a diagnosis of pulmonary tuberculosis, made four months previously. A chest plate made on the mother four months before the baby was admitted to the hospital was said to have been normal.

The patient weighed 7½ pounds at birth and his condition was good. His gestation and delivery were not remarkable. He was fed on breast and strained baby foods. He had fruit juice but no cod liver oil. Growth and development were apparently normal. He sat alone at 6 months, pulled to his feet at 9 to 10 months but had not walked at the date of his admission to the hospital. He spoke several words. No immunization had been done. At the time when the father's diagnosis of tuberculosis was made the baby had a tuberculin patch test which was said to have been positive. This was followed by a chest plate, reported normal.

Present Illness: One week prior to admission to the hospital the baby began running low grade fever and vomiting. Fever continued, and a mild cough developed but there was little vomiting the last three days prior to admission. On the day before admission he suddenly drew his head to one side and the opposite corner of his mouth twitched as though in spasm. He was drowsy and irritable.

Physical Examination: Physical examination revealed a well developed and fairly well nourished white male of 15 months. His temperature was 102 and his weight was 21 pounds and 11 ounces. He had twelve teeth. He was irritable and somewhat drowsy. An occasional cough was noted and breath sounds at the right lung base appeared slightly roughened. There was very mild nuchal rigidity. No other abnormal physical findings were noted. The spinal fluid contained 114 cells with 56 per cent granulocytes and 44 per cent lymphocytes. Spinal fluid sugar was 14 mg. Pandy was negative. Gram and acid fast stains on spinal fluid sediment were negative, as were cultures for pyogenic and acid fast (Petraghani medium) organisms. Chest plate showed no evidence of disease. Mantoux 1:1000 was 4 plus at 48 hours. A presumptive diagnosis of tuberculous meningitis was

made and the patient was started on streptomycin intrathecally and subcutaneously, as well as Promizole by mouth.

During the first three weeks in the hospital, spinal taps were done every second day and intrathecal streptomycin was injected. The first intrathecal dose was 50 mg., the second 40 mg., and thereafter the dose was 30 mg. Throughout his stay in the hospital, with the exception of ten days, to be discussed later, this patient received one-half gram of streptomycin, intramuscularly, daily. This dose was divided into four equal parts and given each six hours. One-fourth gram of Promizole was given twice daily. General diet, with supplementary vitamins, was given. Temperature was normal after six weeks. On the days when intrathecal streptomycin was given the temperature always rose one or two degrees higher than on the alternate days when streptomycin was not given. Until the last month of his life the infant was never very ill. At eighteen months of age, when he had been in the hospital three months, the baby appeared completely well and normal with the exception of the fact that he dragged the left leg slightly when walking. He said many words and made two and three word sentences. He was happy and a great pet of all of the hospital personnel. At this time he had sixteen teeth and his head circumference was 18¾ inches. X-ray of the chest appeared normal. Mantoux 1:1000 was repeated and read as one plus at 72 hours. The sedimentation rate was 12 mm. in one hour (Wintrobe).

January 15, 1949, when he had been in the hospital five months, he developed a cold with a cough and low grade fever. Penicillin by injection was given but general malaise continued and three weeks after the cold began the baby developed vomiting and diarrhea which persisted for about a week in spite of dietary adjustment. X-ray of the chest at this time was negative. Following this episode of vomiting and diarrhea the patient became apathetic, irritable, and began to run occasional elevation of temperature. Streptomycin was discontinued for a period of ten days, January 25 to February 5, 1949, with no improvement. Culture of the spinal fluid made January 7, 1949 was the first reported positive for acid fast organisms. When this positive report was received, a month after the culture was

made, streptomycin was resumed intramuscularly and intrathecally. For a period of 26 days daily spinal taps were done and 40 mg. of dihydrostreptomycin were injected intrathecally. In spite of this treatment the patient steadily deteriorated. He became stuporous, refused his food, and vomited occasionally. Fever was low grade until the last week of the patient's life when the temperature ran to 103 and 104 degrees daily. He had an occasional light convulsion, lapsed into coma, prior to which it was evident that he had defective hearing and vision, and following which he expired.

Numerous spinal fluid examinations and cultures were made. Frequent, careful, acid fast stains on the sediment of spinal fluid failed to show acid fast organisms. One guinea pig inoculation was negative. Two of several acid fast cultures were positive.

Postmortem Examination: A postmortem was done by Dr. J. F. A. McManus and his report follows:

The body is that of a white male infant of about eighteen months of age. The body has been embalmed by the arterial method. There is no edema or jaundice. The limbs show well marked rigor mortis. The head is hydrocephalic and is 20.5 inches in circumference. The eyes, nose and mouth do not appear abnormal. The chest is symmetrical. The abdomen is full. The extremities appear normal.

Abdominal cavity: There is no excess fluid or any gas present in the abdominal cavity. The organs are normal in color and arrangement. The bladder is slightly dilated, reaching up to the level of the umbilicus.

Thoracic Cavity and Mediastinum: Both pleural cavities are free from fluid and adhesions. The lungs do not collapse when the chest is opened. There is slight excess clear, straw colored, yellow fluid in the pericardial sac.

Organs of the Abdomen and Trunk: The organs of the abdomen and trunk do not show any abnormality. There is no pulmonary tuberculosis nor primary tuberculous complex to be seen. There is no gross indication of miliary tuberculosis or hematogenous tuberculosis of the liver, spleen or kidneys. The intestines show no ulceration or induration. The lymph nodes are quite normal.

Cranial Cavity: The cranial cavity and scalp were under considerable tension. When the scalp was cut through, it is forced open and gaps. On removing the scalp, bones of the skull are thin and the marrow purple can be seen through them. The cranial venous sinuses are free from thrombi. The cranial nerves appear normal at origin. Both the hemispheres are apparently dilated due to dilatation of the ventricles. The floor of the third ventricle has forced down the tuber cinereum.

The gyri are flattened and the sulci are obliterated in the cerebral hemisphere. There is a gelatinous, slightly greenish yellow exudate around the fourth ventricle and the exudate extends slightly forward but it does not extend up over the cerebral hemispheres. No tubercles can be seen on the hemispheres or anywhere else. The gelatinous material shows no tubercles grossly. The exudate at the base of the brain extends forward around the tuber cinereum and up to the chiasm.

The lower thoracic and lumbar spine are opened. There is no hemorrhage or exudate seen around the dura or around the cord. The appearances are entirely normal.

Sections (microscopic) of the brain show an active tuberculous meningitis. There is marked involvement of vessels. Caseation is prominent. Acid fast organisms can be demonstrated in the caseous foci. The organisms are not numerous.

The greatest concentration of exudate is around the base of the brain. However, isolated tubercles and caseous foci are found in the meninges from over the vertex. These are down in the depths of the sulci.

No localized changes are found within the brain substances. The organs of the trunk show no very remarkable lesions. There is no hematogenous tuberculosis.

The organisms are identified as *M. tuberculosis*. The streptomycin sensitivity test shows a high degree of sensitivity. The organism is restricted or inhibited in growth by streptomycin concentration as low as 0.39 micrograms.

CASE 2

W. C., age five months, admitted to Decatur General Hospital May 14, 1948 and discharged June 9, 1949. This baby, referred by Dr. A. M. Roan of Decatur, was brought to the hospital because of convulsions. Present illness was said to have begun about a week before admission when white patches were noted in the mouth. He was said to have had no fever and to have eaten well. On the day before admission he was taken to a physician in a neighboring town who prescribed penicillin tablets, a cough medicine, and some "little white tablets." On the night before admission the baby went into convulsions and was seen by another doctor who said that he was fever free but in convulsions. A spinal tap done by him was said to have been grossly bloody. The patient was referred to Dr. Roan who later referred him to me.

Family history revealed that the father and mother were living and well. There were no siblings. An uncle recently had tuberculosis and there had been some contact with the patient. Past history revealed

nothing remarkable except that no supplementary vitamins and little solid food had been given.

When first seen by me on the morning after his admission the patient was critically ill. He was comatose, mildly cyanotic, and his temperature was 101.5. The heart and respiratory rates were rapid. Opisthotonos was marked. The skin showed several small, crusted lesions with surrounding evidence of scratching. No petechiae were evident. The pupils were regular and equal and reacted to light. There was mild, bilateral nystagmus. Ears and nose appeared normal. There were small, reddish areas over gums, tongue and mucous membranes of cheeks. The lung fields appeared clear, heart tones normal, and the abdomen was not remarkable. The extremities were spastic. They were held in extension, particularly the left upper extremity with the palm closed, the fingers clenched, and the entire extremity pressed tightly against the bed. The same signs were evident in the right upper extremity but to a lesser degree. Moderate nuchal rigidity and bilaterally positive Kernig's signs were present. Knee jerks were approximately equal and active. Babinski, Gordon, and Chadwick signs were negative. Chvostek's sign and Trousseau's sign were also negative.

The following laboratory work was obtained: hemoglobin 11.5 gms.; red blood count 5,450,000; white blood count 19,100, with 62 per cent granulocytes and 38 per cent small lymphocytes. Urinalysis was entirely negative. A spinal tap revealed grossly and uniformly bloody fluid. The cell count was considered of no value but the spinal fluid sugar was determined as 34 mg. per cent. Blood culture for pyogenic organisms and blood Wassermann were reported negative. Tuberculin skin test 1:1000 was negative at 48 hours but when repeated in 1:100 dilution it was 4 plus at 48 hours. X-ray of the chest revealed a small patch of what appeared to be pneumonitis in the left upper lobe. Blood calcium done two days after admission was determined as 10 mg. per cent and blood sugar as 94 mg. per cent.

The diagnosis of this patient on the first day of admission to the hospital was in confusion but he was started on $\frac{1}{2}$ gm. of streptomycin daily in eight divided doses,

given each three hours. Twenty-five mg. of streptomycin were left in the spinal canal. He was given 20,000 units of crystalline penicillin each two hours, intramuscularly. Also each eight hours he was given a hypodermoclysis of fluid containing 1 gr. of sodium sulfadiazine per pound of body weight. The baby remained critically ill but was improved after the first 48 hours so that he took liquids freely by mouth, and subcutaneous fluids with subcutaneous sodium sulfadiazine were discontinued. One-half gram of diazine was then given orally every four hours. Spinal taps were done daily and no more gross blood was obtained although the fluid was somewhat xanthochromic for several days. On the day following admission to the hospital the spinal fluid was reported as containing many microscopic red blood cells and a sugar of 31 mg. No acid fast or other organisms were found. Four days following admission spinal fluid cell count was 1000 with 80 per cent lymphocytes and 20 per cent granulocytes and the sugar was 39 mg. per cent. No organisms were found. A chest plate made May 28, 1948, two weeks following admission to the hospital, showed infiltration throughout both lung fields in their upper two-thirds. This infiltration appeared to be miliary in type.

The patient's physical findings, the positive tuberculin skin test, the miliary type pulmonary infiltration, and the spinal fluid suggested very strongly miliary tuberculosis with tuberculous meningitis. Penicillin and sulfadiazine were discontinued on 5th and 6th days after admission. From the day of admission the patient received one-half gram of streptomycin intramuscularly. At first this dose was divided into eight injections and given every three hours; later the injections were less frequent but the total amount of drug received was the same. Streptomycin was continued until September 4, 1948, ($3\frac{1}{4}$ months). During the first fourteen days of hospitalization he also received 25 mg. of streptomycin intrathecally daily. After that, for a period of ten days, he received 25 mg. of streptomycin intrathecally every second day. From June 7, 1948, that is, three weeks after admission, to November 19, 1948 he received $\frac{1}{4}$ gram of Promizole twice daily orally. He therefore received Promizole for a period of five

months. He was given a satisfactory diet with supplementary vitamins. For several days after admission his condition was critical but he slowly improved so that within three weeks he seemed to be in good condition except for moderate opisthotonos, incoordination and extreme weakness. Hearing and vision appeared normal. He was fever free after the first twelve days. Throughout the period when the baby was receiving streptomycin he kept a dry, crusty, maculopapular rash over the body, particularly over the lower extremities. An x-ray of the chest made June 26, 1948 suggested clearing of the miliary infiltration and a plate made November 19, 1948 was read as being negative for active disease. I am indebted to Dr. William Grosfeld, Director of the Morgan County Tuberculosis Sanatorium, for the interpretation of the x-ray films.

By July 25, 1948, 2½ months after admission, the baby's condition appeared good. The eyes seemed normal and the baby looked intelligent. He cried for attention. He would not reach for a toy but would hold it momentarily when it was placed in his hand. Some nuchal rigidity was still present but was much less than previously. He could lie on his back with comfort. By August 12, 1948, when the baby was eight months old and had been in the hospital for three months, he was eating well and had gained some weight. He could not sit alone or roll over and he had general incoordination. He still would not reach for a toy. Head control was no better than that of a two months old baby. Mild opisthotonos was still present. On August 28, 1948 the spinal fluid cell count was 70 with 70 per cent lymphocytes and 30 per cent granulocytes. The Pandy test was one plus, and the spinal fluid sugar was determined as 50 mg. per cent. No acid fast organisms could be found on the smears. By October 9, 1948, five months following admission, the baby was much improved. Head control was good. The baby turned himself over and over in bed. He reached for a toy and played with it happily. He could bear most of his weight on his feet. He appeared normal mentally. Spinal fluid, October 20, 1948, was normal except for one plus Pandy.

At 11½ months of age, when the patient had been in the hospital 6¼ months, he

weighed 16¼ pounds and was 27 inches tall. His head circumference was 17¾ inches and his chest circumference 16½ inches. He had seven teeth. He had moderate incoordination, and head control was that of about a four months old baby but his improvement seemed to be steady. Reflexes appeared normal. The baby's fontanel was soft and depressed, and he bore most of his weight on his feet. A tuberculin skin test 1:1000 was repeated and 72 hours later there was an area 1 cm. in diameter, definitely raised and red. Blood count was normal, as were the sedimentation rate and the urine. Spinal fluid examination revealed eighteen cells with little or no increase in protein, that is, less than one plus Pandy. The sugar was 49 mg. per cent. A culture for acid fast organisms was later reported negative. On November 19, 1948, six months after admission, Promizole was discontinued.

Throughout his hospital stay the patient had frequent blood counts and urinalyses, all of which were within limits of normal. As has been stated before, spinal fluid examinations were done daily throughout the first two weeks, every second day for the next ten days, and only occasionally thereafter. Although diligent search for acid fast bacilli was made time and again, none were found. Guinea pig inoculation made on fluid obtained several days after the onset of therapy was negative. Spinal fluid sugar was within normal limits after the first five days. Although one is not able to say positively that this infant had tuberculous meningitis, the weight of evidence is heavy and the diagnosis can be made with reasonable assurance. Because of the baby's very poor home environment, he was kept in the hospital much longer than would have been indicated otherwise. He received a great deal of attention from the hospital personnel and to them much of the thanks for his apparent recovery is due. The baby was discharged June 9, 1949 in good condition except for muscular incoordination. He ran over the hospital ward in a stroller at will. He could stand on his feet at the rail but was unable to pull himself up. He did not talk. Mentality appeared good, as did vision and hearing. It is hoped that he may be followed for future information.

COMMENT

In reviewing the management of these cases it is obvious that the dose of Promizole was probably too small to be most effective. One may wonder if larger doses of both Promizole and streptomycin may not have arrested the disease in J. P. Until the report of Levinson appeared, I felt that failure to give streptomycin intrathecally every day instead of every second day during the first

three weeks was probably a serious error. Now it seems that other reports are needed to settle the question of intrathecal therapy. It is perhaps significant that early forms of treatment of most types of meningitis involved some kind of intrathecal medication later largely abandoned as more information was acquired. Perhaps this will be true of tuberculous meningitis.

MANAGEMENT OF ACUTE HEAD INJURIES

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This vehicular age causes the general practitioner to become increasingly uncomfortable about the multitude of head injuries seen and treated by him. It is felt that such treatment need not be directed by a specialist in the field. It is strongly urged, however, that the general practitioner become familiar with the signs and symptoms indicating cerebral conditions necessitating surgical intervention. Those patients harboring space-occupying intracranial lesions, such as hematomata, will, under conservative treatment, succumb to their disease. Those patients treated surgically will usually recover if the diagnosis is made at an early stage, and if the services of a neurosurgeon are available. It is felt that a resume' of the pertinent diagnostic criteria necessary to recognize a surgical condition within the skull should be presented.

CONCUSSION (DIFFUSE BRAIN DAMAGE)

The most common head injury seen by the general practitioner is that of a blow to the head causing mild, or severe, concussion of the cerebrum. This unconsciousness may vary from only a few seconds to many hours. The prognosis may also vary from good, with uneventful recovery, to that of death. The pathology of concussion is poorly understood. It is felt that shaking of the brain is responsible for changes in the brain cells. These changes may vary from nothing at all, microscopically, to edema and vacuolization of the cell. This is the so-called "reversible phase" of cerebral edema. This type of pathology will respond well to dehydrating measures, described below. The more serious

diffuse brain damage, which may go on to death despite treatment, consists of the above changes plus multiple petechial hemorrhages scattered throughout the gray and white matter of the brain, even into the pons. A hemorrhage of any consequence, even the size of a match head, in the pons usually results in death. There is no specific treatment for this severe diffuse brain damage beyond that of the resolution of the hemorrhage afforded by nature. This takes time and the patient must be kept alive, with his vital signs functioning properly, while this period of time passes.

The *treatment* of concussion of the brain, or diffuse brain damage, consists of aiding the vital functions so that the patient may survive a passage of time, and dehydrating the brain to reverse the pathologic process of edema within the brain cell.

This treatment ranges from the heroic use of stimulants, where demanded, down to determined and masterful inactivity in the mild cerebral concussion.

The mild cerebral concussion, exhibiting only a temporary loss of consciousness followed immediately by a state of wakefulness wherein the patient is alert, rational and symptom free, needs no treatment beyond that of observation.

The severe case of cerebral concussion, associated with diffuse brain damage and multiple petechial hemorrhages, entails the use of such life-saving measures as *oxygen* to enable the brain cell to metabolize properly, and thus decrease their own edema. It also stimulates the vital functions carried on throughout the cardiovascular system. The

head of the bed is *elevated* to allow proper venous drainage and aid in the lessening of cerebral edema. The tracheal tree and the nasopharynx are *suctioned* regularly so that tracheal secretions will not cause the patient to drown. The patient is *stimulated* frequently with caffeine, injected intramuscularly at regular intervals. The purpose of the caffeine is two-fold: first, to serve as a stimulant to the cardiovascular system and, second, to cause a lessening of the cerebral edema by the process of dehydrating the body and thus the brain.

The old fashioned subtemporal decompression for cerebral edema has been largely replaced by *osmotic agents* designed to cause a passage of excess fluid from the brain cell, and the brain, into the blood stream. These agents are many. The most efficacious during the past few years has been sucrose, given as a fifty per cent solution intravenously in dosages up to one hundred cubic centimeters. This may be repeated every four hours. It is true that there is considerable renal shock occasioned by the administration of this agent. This seems secondary, since its use may be life-saving. Glucose has long been used as a dehydrating agent for the brain. It is unsatisfactory since it causes a secondary rise in cerebrospinal pressure, following the initial drop. Purified albumin, a fraction from human plasma, has been used with marked success but has not been completely evaluated as yet and is therefore not available for general use. During the War, hypertonic human plasma was used with considerable success in relieving cerebral edema.

Occasionally, magnesium sulfate is administered by mouth to combat cerebral edema. This is an efficacious drug and can be given as a fifty per cent solution, one ounce daily. In extreme cases, where heroic dehydrating measures are necessary, the magnesium sulfate can be given rectally via a continuous Murphy drip. This seems rather old fashioned, however, in view of our more recent osmotic agents.

It is felt advisable to maintain the patient's bodily *fluid requirements* rather than to institute a general dehydrating regimen. In other words, the patient's fluid intake is not limited but is maintained at the optimal level consistent with activity and temperature. This usually means a fluid intake of

around two liters per day and sometimes as much as three liters per day.

Restlessness is sometimes a distressing problem. Morphine, of course, is contraindicated because of the depression of the vital centers, particularly the respiratory center. Increased intracranial pressure has already compromised these vital centers and the use of morphine can sometimes cause death. It is necessary, therefore, for a milder drug to be used to combat restlessness. Sodium luminal, grains one or two, given hypodermically, has been successful for this purpose. Paraldehyde, four or five cubic centimeters given intramuscularly, and used directly from the bottle, since the contents are sterile, is a valuable drug for this purpose also. It may be necessary to use chloral hydrate and bromides but this is rarely the case.

Convulsions usually indicate a more localized cortical brain damage but they are nevertheless of such grave import that they must be controlled. Sodium amytal, given intravenously in small dosage, controls convulsions with apparently little depressant effect upon the vital centers. It is suggested, however, that this be given slowly, to the point of causing the convulsion to cease, at which time the injection is discontinued. This usually calls for only two or three grains of the drug. Phenobarbital can then be given by mouth.

The patient may remain in *coma* for many days or weeks. During this time it is necessary to keep up the general physical well being of the patient, to keep his tracheal tree clear and free from tracheal secretions or aspirated food, and to maintain his fluid and caloric requirements. If the period of coma is only that of a few days, this can be done by intravenous fluid administration, alternating glucose in saline solution with glucose in distilled water. It is wise to administer amino acids, intravenously, in the proper amount during this time. The suction machine, which should be present in the room, is used freely to maintain a clean bronchial tree.

If the period of coma exceeds a few days, it may become necessary to insert a gastric tube which should be small and soft. This tube should be left in situ, rather than replaced with each feeding. The reason for this is obvious. Repeated reinsertions of

the tube may cause liquids to be forced into the tracheal tree and cause pneumonitis and death. If such tube feedings are resorted to, the diet should consist of a mixture of milk, eggs, sugar and vitamins.

Skin care, to prevent the formation of decubitus ulcers, is obvious and will be carried out by trained nursing personnel. The use of an indwelling catheter in those patients who are incontinent is to be condemned if it is continued over a long period of time. It is suggested that a Munro type of tidal drainage, or other equivalent alternating irrigation and drainage apparatus be set up by the attending physician so that the danger of bladder infection is minimized.

The control of *headache* and pain is best limited to the use of coal tar derivatives and small doses of codeine. Barbiturates, either by mouth or in the form of suppositories, are of great value in the control of insomnia and restlessness.

During all this detailed and vigilant care of the unconscious patient the need for *eternal observation* should not be neglected. For this reason it is advisable that the pulse, respiration and blood pressure be taken at very frequent intervals. This not only gives a check on the vital signs of the patient but it enables the examiner to determine the state of responses. This is probably the most important and reliable index of the degree of injury to the brain. In other words, a lightening or deepening coma can be detected by this means. It is well known that such brain damage is reflected in a slowing pulse and rising blood pressure. However, it is the author's belief that the main value of such close observation is to determine the state of the patient's responses.

SKULL FRACTURES

Simple linear skull fractures need no care beyond that of the treatment outlined above. The mere fact that the bony cage has been fractured is of no importance. The damage to the underlying cerebral tissue is the only concern. A period of observation and watchfulness, plus treatment of the accompanying cerebral concussion or edema, should suffice to cause the patient to recover unless the diffuse brain damage is severe enough to cause death.

Compound skull fractures constitute one indication for surgery. That indication, however, is only for that of minor surgery wherein there is a debridement performed and devitalized scalp or bone tissue removed. If the dura mater and the brain have been lacerated and there is brain tissue extruding from the wound, it is necessary that a neurosurgeon be called for the removal of the necrotic brain tissue and proper repair of the coverings of the brain, skull and scalp. If, however, there is no sign of depression of the skull fragments and if there is no extruding brain material, the general surgeon can do a debridement of the scalp and approximate the clean edges of the scalp wound. Insertion of a mixed penicillin-sulfanilamide powder into this wound and suture of the galea with interrupted, black, silk sutures, followed by equivalent repair of the scalp, constitute an accepted means of repair.

It is expected that the concomitant cerebral concussion, edema, or diffuse brain damage will be treated first and that this is of more importance than the immediate suturing of the scalp wound.

Depressed skull fractures usually constitute an indication for surgery. Very small depressions over silent areas of the cortex may be left without elevation. However, since the entire cortex is epileptogenic, it is felt that a depression of any consequence over any part of the cortex should be elevated, either at the time of the injury or at a more suitable later date when the patient's vital signs have stabilized. This is generally thought to be the task of the specialist since there may be an underlying hematoma or brain damage. Such brain damage, if left unrepaired, will cause later convulsions.

Basal skull fracture per se is not an indication for surgery. Basal skull fractures usually are not accompanied by intracranial hemorrhage beyond that of subarachnoid hemorrhage. Since subarachnoid hemorrhage is the usual accompaniment of any severe brain damage and is not a surgical condition, the discovery of blood in the spinal fluid need occasion no concern if the blood is clearing upon repeated spinal punctures. The symptoms of a basal skull fracture usually are those of accompanying bleeding from the orifices, such as the ear,

eye, nose, or the mouth. No direct treatment of this is necessary beyond the precaution of placing the patient on an antibiotic, such as penicillin, or sulfanilamide. The orifice is kept occluded with sterile cotton but no attempt is made to irrigate it because of the danger of introducing infection. The treatment of the concomitant diffuse brain damage is more important than concern about the basal skull fracture.

The proper time for the *taking of x-rays* of the skull following a head injury has always been debated. It is generally held that the x-ray should be delayed until the patient's vital signs have stabilized. In other words, manipulation of the head or skull may cause further intracranial bleeding or depress the patient's vital signs. X-rays are less important than the treatment of the cerebral concussion and should be delayed. Once the patient has recovered consciousness, the x-rays may be taken with impunity.

INTRACRANIAL HEMORRHAGE

EXTRADURAL, OR MIDDLE MENINGEAL, HEMORRHAGE

The real need for a neurosurgeon during the care of patients with head injuries lies in the occasional case which will exhibit signs of intracranial hemorrhage. This must be treated surgically. The complications and technical difficulties entailed in opening the skull, the proper evacuation of the hematoma and occlusion of the bleeding points, entail so much technical and detailed knowledge that the neurosurgeon should be called upon to handle it. The patient *who has had a head injury from which he has awakened and who lapses back into an ever deepening coma* should be suspected of harboring an extradural intracranial hemorrhage, usually due to tearing of the middle meningeal artery. This is a serious and critical situation. The patient will die within a matter of hours unless proper surgical treatment is instituted. The recognition of the syndrome therefore is of paramount importance. It is felt by the author that an extradural hematoma not discovered and treated under eight hours has little chance for survival. This figure, of course, varies with the caliber of the vessel which has been torn but is based upon tearing of the middle meningeal artery.

It is not necessary for the patient to exhibit a *lucid interval*. A diagnosis is most easily made when the patient does exhibit a lucid interval and then goes back into a deepening coma. The usual signs accompanying this deepening coma are those of a *dilated pupil* on the side of the hemorrhage, associated with a *contralateral paralysis* or increased deep reflexes, with a Babinski sign on that side. Spinal puncture, if done, would reveal a *markedly increased spinal fluid pressure*, with very few blood elements in the fluid.

This is the typical or textbook picture of an extradural hematoma. It by no means constitutes the picture of every extradural hematoma and it is believed there is no typical or textbook picture.

The criterion of *increasing drowsiness or coma* is the most important sign or symptom exhibited by the patient with intracranial hemorrhage. Those patients must be subjected to exploratory burr holes, placed over the proper areas of the brain, to find and evacuate the hematoma and to occlude the bleeding point. These burr holes must be placed within a short period of time. A negative exploration for a hematoma is of no consequence since no harm is done and the patient's life is not endangered by the procedure. One hematoma found through an exploratory burr hole is worth one hundred negative explorations.

The other signs of increasing intracranial pressure are those of a slowing pulse and a rising blood pressure. It must be remembered that hemorrhage of a middle meningeal artery, causing extradural hematoma, is brisk and that the development of the signs and symptoms is rapid. This also means that compression of the brain, with torsion of the pons, consequent pontine hemorrhage and death, secondary to increased intracranial pressure, all occur at a relentless, fast tempo. Speed in treatment is essential.

SUBDURAL HEMATOMA

This constitutes a form of hemorrhage in the cranial cavity which is usually venous and therefore slower than the above described type of hemorrhage, which is arterial. A subdural hematoma may, however, be in the acute stage and may occupy enough space to compress the brain and

cause increased intracranial pressure. We have, therefore, two forms of subdural hematomata: the *acute* and the *chronic*, the first of which is mostly liquid, fresh blood and which is usually discovered while exploring for an extradural hematoma. These develop during the early stages of a head injury and are almost always confused with an extradural hematoma because of the localizing signs and the increasing intracranial pressure. Mere evacuation of this cyst-like collection of blood and fluid suffices to relieve the chain of events.

A *chronic* subdural hematoma is probably an extension of the pathology described above. There is continued venous leakage or seepage into the subdural space. This blood then organizes and forms a fibroblastic membrane on either side of the clot. The old blood in the center of the clot liquefies, and fluid, by osmosis, passes through the confining membranes. The clot then grows by osmosis, compresses the brain, and acts as a brain tumor. This chain of events takes much longer to come about than the two hemorrhages described above. The usual thing is to discover increasing intracranial pressure, drowsiness and localizing signs after the passage of a few weeks or even months. The head injury itself may be remembered with difficulty.

Spinal puncture, if done, and it should not be done in the face of choked discs, would reveal some blood elements in the spinal fluid with markedly increased spinal fluid pressure. It goes without saying that no cerebral spinal fluid should be removed if the pressure is found to be high.

Operative removal of the subdural hematoma has been refined so that it carries very little mortality. It may be evacuated through a burr hole or a series of burr holes, or it may be necessary to turn an osteoplastic bone flap to permit the evacuation of the entire blood clot. Recovery is usually complete, as contrasted to the surgical treatment of extradural hematoma wherein the mortality rate is high.

Subdural hygroma is included under the subdural hematomata because of the location of the collection of fluid, as well as the fact that it has been called many things, including acute subdural hematoma. Munro of Boston, probably the foremost exponent of surgical intervention in head injuries, has

classified this as an acute subdural hematoma. It has also been called an external hydrocephalus. Actually, however, it is formed by the tearing of the arachnoid with the entrapment of fluid beneath the dura. This acts as a cyst, increases intracranial pressure and causes local compression of brain tissue. It seems possible now to diagnose the hygroma preoperatively because of the little increase in intracranial pressure, as contrasted to the extreme headache and blunting of the affect noted in these patients. A burr hole placed over the hygroma, with opening of the dura and evacuation of the fluid, causes a complete return of the brain to normal.

TRAUMATIC INTRACEREBRAL HEMORRHAGE

This occurs when any vessel beneath the substance of the brain is torn or injured by trauma. This may cause a localized collection of blood under the cortex and gives the exact signs and symptoms of either an extradural or a subdural hematoma. Since it follows trauma, and the bleeding is rather brisk, the connection between the trauma and the increasing drowsiness and intracranial pressure is clear. At operation the intracerebral hematoma betrays itself by localized swelling of the convolutions, indicating a space-occupying lesion beneath the cortex. It is sometimes necessary to make a cortical incision to evacuate this hemorrhage. Occasionally, however, it is possible to evacuate it, if the clot is liquid, through a ventricular needle. The bleeding has usually stopped by the time the surgery is performed. It is sometimes necessary to pass a ventricular needle into the ventricle, remove the fluid and replace it with air, thus doing a ventriculogram, to localize accurately the site of hemorrhage, whether it be extradural, subdural or intracerebral. It is obvious, therefore, that these operative procedures should be in the hands of qualified neurosurgeons.

During all these operative procedures, the usual treatment of head injuries and cerebral edema is carried on as outlined above. It is sometimes necessary, after surgery has been performed, to tap a ventricle repeatedly to relieve increased intracranial pressure or even to do cautious lumbar punctures and slowly relieve the pressure by half. *This, however, should not be done until the pri-*

mary pathology has been relieved. Otherwise it may be found that there will be herniation of the brain stem with medullary compression and rapid exodus.

There are many complications of head injuries which should not be included in the management of the acute stage. No mention will be made here of cerebral defect or loss of intelligence, or prognosis as to convulsions or permanent paralyses.

Postconcussional headaches and dizziness should not be discussed here.

Occasionally a collection of air will be found to be present within the cranial cavity. This air may be subdural, intracerebral or intraventricular. It is usually caused by a fracture through one of the air sinuses, causing air to collect within the cranial cavity. X-ray will reveal this. The condition is called *pneumocephalus*. It may be associated with rhinorrhea, or leakage of cerebral spinal fluid. If the leakage of the cerebral spinal fluid, or the air itself, is not stopped or resolved within ten days, surgical intervention should be planned and carried out. This consists of grafting the defect on the inner surface of the skull so that air may not have ingress or cerebrospinal fluid may not have egress. The danger of meningitis and brain abscess is obvious if this procedure is not carried out.

SUMMARY

The treatment of acute head injury has been discussed. The surgical principal involved in the treatment of intracranial hemorrhage, depressed and compound skull fractures is presented. It is felt that the general practitioner should care for the head injury unless signs or symptoms of increasing intracranial pressure arise. When these symptoms do arise, it is felt that the general practitioner should then consult, without delay, a specialist in this field for surgical treatment.

The great physicians of all time have understood that medicine is not a study of disease, but a study of man: an individual who is a member of a family and who is part of a community. The purpose of medicine is to make available to all the people the achievements of science as they relate to the promotion of health and to the prevention and treatment of disease.—W. G. Smillie, M. D., *New England J. Med.*, Jan. 12, '50.

PEDIATRIC CASE REPORTS

Edited by

AMOS C. GIPSON, M. D.

Gadsden, Alabama

P. McM., age 2 years, was brought to the Children's Clinic with the following history: She was doing well until 5 weeks previously when she developed a cough and fever which later proved to be measles. The rash cleared in the usual time but the cough and fever continued. The cough began to change in character. It began to come in definite attacks at regular intervals, worse at night, and gradually became more severe until she would lose her breath and vomit after coughing.

On July 29, 1949, the day of admission, the temperature was 103°; and the white cell count 136,000, with polymorphonuclear leucocytes 15 per cent; lymphocytes 82 per cent; and mononuclear leucocytes 3 per cent. Hemoglobin was 66 per cent, the red cell count 2,760,000, and the spinal fluid was clear. X-ray of the chest revealed bilateral parenchymal infiltration, consistent with a bronchopneumonia. She was given 20 cc. of pertussis serum (human) intramuscularly and 200 cc. citrated blood intravenously. Chloromycetin, 50 mg. every 4 hours, was started.

Due to the extreme leucocytosis, bone marrow studies were done. The findings were consistent with pertussis.

7/30/49—Patient's condition and cough about the same. Dihydrostreptomycin, 50 mg. every 3 hours, was started.

7/31/49—Patient had improved some, the temperature was down to 100° and she was not losing her breath or vomiting following coughing. The white cell count was 71,250, with polymorphonuclear leucocytes 35 per cent, lymphocytes 61 per cent, and mononuclear leucocytes 3 per cent. Twenty cubic centimeters of pertussis serum (human) were given intramuscularly.

8/2/49—The cough was much improved and the temperature was normal. Twenty cubic centimeters of pertussis serum (human) were given intramuscularly. The white cell count was 47,000, with 30 per cent polymorphonuclear, 65 per cent lympho-

cytes, one per cent mononuclears, and 4 per cent eosinophils.

8/4/49—She was much improved, still having paroxysmal cough which was much less severe and the attacks further apart. She continued to improve steadily and the cough had practically disappeared in two weeks.

This case was one of severe whooping cough complicated by bronchopneumonia.

This case is reported to show how high the white blood count can get in whooping cough and the beneficial effect of pertussis serum.

Chloromycetin and dihydrostreptomycin have been reported to be of value in the treatment of this disease but in my hands, in cases where these drugs were used alone for several days, the improvement was too little and the cost too great to use them except in severe cases and as an adjunct to the serum. They were used in this case along with the serum due to the extreme severity of this case. In my opinion, pertussis human serum is the treatment par excellence. Just as good results have been reported from rabbit serum but I have not used it.

Whooping cough is a highly contagious disease and a severe disease. Before the availability of sulfonamides, penicillin and serum, there were more deaths from whooping cough than all the other childhood contagious diseases.

Whooping cough pneumonia under one year of age was practically 100 per cent fatal. Therefore, all babies should get pertussis toxoid starting at 5 to 6 months of age and be repeated at intervals of 2 years throughout the preschool age.

The early diagnosis of tubercle remains one of the major problems of general practice. The standard of what constitutes early diagnosis has considerably altered. In the days before the general use of chest radiography one had to depend upon the finding of abnormal physical signs in the chest or on the presence of the bacilli in the sputum—a stage nowadays considered too late. In theory, of course, early diagnosis is quite easy. The chest is x-rayed and the problem is solved. But in actual practice things can work out very differently. The early signs are so slight, so varied, so indeterminate, that unless a doctor is tubercle-conscious an x-ray may not be called for and precious time is wasted.—R. J. Perring, *M. D., Lancet (London) Dec. 1949.*

Gastro-Intestinal Allergy in Children—After one finds the food or foods which are responsible for the allergic symptoms, treatment consists of removing the offending foods from the diet, or of modifying the food so that it will not cause symptoms, or of modifying the patient's response to the food. For example, if a patient is found to be sensitive to chocolate it is not difficult to eliminate chocolate from the diet. Elimination of the offending food, if this is possible, is the most simple method of treatment and produces the most clear-cut results. However, if a small infant whose sole article of diet is milk is sensitive to that milk, then elimination is difficult. In this case it has been found that cow's milk that has been subjected to varying degrees of heat, such as dried milk or evaporated milk, may be taken without producing symptoms, when fresh milk cannot be tolerated. One of the factors in cow's milk to which children often become sensitive can be completely or partially destroyed by heat. If this modification of milk does not result in relief of symptoms it then becomes necessary, if the symptoms are severe enough, to change to some other food, such as goat's milk or in some instances to soy bean preparations.

In older children where there is sensitiveness to several foods, and elimination would unduly restrict the diet, the patient's response to these foods usually can be modified through a process of what one may call desensitization. Patients themselves have a tendency to carry out this desensitization through repeatedly taking the foods to which they are sensitive, provided they do not take enough to produce severe symptoms. This is what the layman calls "out-growing" the condition. Desensitization to a food can be carried out through starting the patient on infinitesimally small amounts of the food by mouth and by gradually increasing the amount or by the injection of extracts made from the particular food or foods to which the individual is sensitive. One must go slowly enough to avoid the production of symptoms if possible. This requires a great deal of patience, but we have successfully desensitized a number of infants to eggs in this manner. The subcutaneous injection is more rapid, but one should begin with an amount sufficiently small so as to be sure that no demonstrable reaction occurs. We often begin with as weak a dilution as 1:1,000,000, or even less if the sensitiveness is severe. In this way we have successfully desensitized a number of children to foods to which they are sensitive, or at least have made it possible for them to take these foods without discomfort—foods, the ingestion of which previously produced severe symptoms.

The above methods not infrequently are attended by discouraging results. Failures in many instances may be due to lack of patience, or may be explained by the fact that treatment has not included all the foods which are contributing to the symptoms.—Muecke, J. M. A. *Georgia, April 1950.*

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VITAMIN SUPPLEMENTATION

"With the exception of one report, nutritionists in general note that frank deficiency diseases, especially vitamin-deficiency diseases, have almost disappeared during the last decade in the United States. The majority of cases of clinical vitamin deficiency now seen are in association with chronic alcoholism or some debilitating disease, and a moderate number of cases of scurvy occur in infants because mothers boil the orange juice or cater to dietary dislikes. The cause of this reduced incidence of gross vitamin deficiency in the United States is unexplained. Blankenhorn observes that deficiency began to disappear before the enrichment of flour was practiced generally and has continued to wane in spite of the high cost of food, indicating that improvement is probably not due to gain in economic status.

"On the other hand, a survey of the many studies of the nutritional state of prisoners of war and of the populations of occupied countries during World War II showed that vitamin deficiency becomes prevalent under adverse conditions."

The above is from the recently published inquiry by Culver¹ into this subject. The

1. Culver, Perry J.: Vitamin Supplementation in Health and Disease, New England J. Med. 241: 1011 (Dec. 22) 1949.

Boston investigator's article is extremely interesting and provocative, but because of its length it cannot be completely covered here.

Culver takes the position that many of the signs, which in the past have been thought to indicate vitamin deficiency, are erroneous. He goes on to say: "Inasmuch as many estimates of the incidence of vitamin deficiency in the United States have been based upon the presence of signs that are now shown to be nonspecific, I believe that the problem of vitamin deficiency is minimal. Therefore, it becomes apparent that, with few exceptions, food intake supplies the minimal requirement of essential vitamins, and the widespread use of vitamin supplements does not seem indicated for treatment of an almost nonexistent vitamin-deficiency state.

"There still remains the possibility that vitamins in addition to those in the general diet are of value for improving health or well-being and for promoting recovery from disease." And he further tells us: "The conclusion to be drawn from these investigations is that the American diet, even though it may contain a smaller quantity of vitamins than the generous recommendations of the National Research Council suggest, generally supplies optimal amounts of vitamins and that the indiscriminate use of vitamin supplements does not benefit public health or promote recovery from diseases. Such a conclusion does not deny the existence of an occasional case of vitamin deficiency that requires short-term vitamin supplementation, nor does it deny that the use of large doses of specific vitamins may not be of benefit in certain diseases in which the vitamin has a pharmacologic rather than a nutritive action."

And he also informs us that "Reports of the curative or beneficial effect of large doses of a specific vitamin in a given disease are legion, and such reports, along with advertisement of supposed malnutrition, have acted as stimulants to vitamin sales. In many cases reports of therapeutic success with a vitamin are the result of uncontrolled clinical investigations that do not consider either the natural history of the disease or the possible psychologic effect of vitamin pills."

Some of Culver's statements may border upon the extreme and there are doubtless many who will take issue with him. But he is certainly upon very firm ground indeed when he deplores the indiscriminate and excessive use of vitamins. Vitamins have been with us for quite some time now and it is regrettable that the excessive enthusiasm which greets everything new is apparently not waning at all. A very large portion of the public and, unfortunately, far too many members of the profession have been guilty of badly overdoing treatment with vitamins.

DR. ALVAREZ TO EDIT "GP"

Dr. Walter Alvarez, senior consultant in the Division of Medicine in the Mayo Clinic and widely known author and medical lecturer, has been appointed medical editor of "GP," published by the American Academy of General Practice.

The first issue of the medical association's significant new journal has been mailed to its 12,000 members and other subscribers.

The selection of Doctor Alvarez to succeed Dr. F. Kenneth Albrecht, who died following an automobile accident last month, was announced by Mac F. Cahal, Executive Secretary of the Academy and Managing Publisher of "GP."

Doctor Alvarez is one of the nation's best known physicians. He has been referred to as the "Twentieth Century Osler" by those who would compare him with the famous Johns Hopkins physician who was knighted by the British king.

A native of California, Doctor Alvarez received his M. D. degree from Stanford University Medical School and later studied at Harvard. Since 1926 he has been associated with the Mayo Clinic in Rochester, Minnesota, and has held the position of Professor of Medicine of the Mayo Foundation of the University of Minnesota since 1934. Doctor Alvarez has been a prolific writer on medical subjects for many years and has served as editor on both *The American Journal of Digestive Diseases* and *Gastroenterology*. He has been contributing author to several important books and has more than 650 articles in the medical literature throughout the country.

Having reached the age of retirement at the Mayo Foundation, he is moving his residence to Chicago where he will assume the duties of medical editor of "GP."

The journal is published by the Academy's headquarters office in Kansas City, Broadway at Thirty-Fourth Street.

The appointment of the new editor from among several outstanding candidates was made following a meeting of the Academy's Publication Committee in Chicago yesterday. Dr. Stanley R. Truman, Oakland, California, president of the Academy, is chairman of the committee. Other members are: U. R. Bryner, M. D., Salt Lake City, Utah, Arthur N. Jay, M. D., Indianapolis, Indiana, and D. G. Miller, Jr., M. D., Morgantown, Kentucky.

BLINDNESS

The average American today can expect to live some 20 years longer than was the case in 1900, but in many instances these additional years are bought at the cost of blindness.

"This is the greatest single problem today in the battle to save sight," Mason H. Bigelow, New York lawyer and president of the National Society for the Prevention of Blindness, said in releasing the 1949 Annual Report of the National Society.

The number of adult persons who are blind—allowing for deaths—"is growing at the rate of 4,800 a year," Mr. Bigelow said. Because more people are living longer, "more men and women are being subjected to the blinding diseases that strike most often in later years."

At the other end of the life span "there has been in recent years a 17 per cent increase in blindness from hereditary and congenital causes . . . due partly to the fact that more premature babies are being saved, and in some cases the eyes are imperfectly developed," Mr. Bigelow added.

The hopeful side of the picture is that more than half of all blindness can be prevented.

"During the next decade an estimated 220,000 Americans may lose their sight if we don't do something about it!" Mr. Bigelow emphasized. "For some we can do nothing. But for at least half—110,000—sight *can* be saved by full use of the knowledge we al-

ready possess. Even more might be saved from darkness through additional eye research."

In his report Mr. Bigelow reviewed the gains that have been made in preventing blindness, and outlined the plans of the National Society for an intensified campaign of public education and research, aimed at the goal of actually preventing all blindness that is preventable.

"The number of persons under 20 years of age who are blind is gradually decreasing, thanks to the continued fight against the twin enemies of sight: disease and injury," Mr. Bigelow reported. "Blindness among infants due to the disease known as 'babies' sore eyes' has dropped 90 per cent in the past four decades. . . . The indiscriminate public sale of fireworks, which caused 500 eye injuries in one Independence Day celebration, is now widely regulated. Since 1936 there has been a 50 per cent reduction in blindness among children due to venereal disease. Eye surgery today borders on the miraculous: cataract operations are 90 to 95 per cent successful."

Yet, "every week some 420 Americans become blind, more than half of them *needlessly*. . . . The future calls for redoubled effort to protect the eyes of both young and old."

The National Society has set a 1950 budget goal of \$500,000—compared with \$299,755 for 1949. "The battle against preventable blindness demands a greatly intensified effort: greater participation on the part of the public, and a larger campaign of public education," Mr. Bigelow said. "Increased field work is planned with state and local prevention of blindness groups—strengthening present agencies and organizing new ones where needed.

"One of the greatest needs is for a stepped-up program of research on eye problems," Mr. Bigelow added. "For instance, the cause of glaucoma is unknown in 95 per cent of cases, and in 70 out of 100 cataract cases doctors do not know why the disease occurs. (Glaucoma causes 12 per cent of all blindness, and cataracts are the largest single cause of blindness among older people.)

MIGRAINE

One of the most disabling of all those diseases which do not kill is migraine. These periodically recurring sick headaches are thought to be due to a spasm of the arteries supplying the brain and the dilatation of these blood vessels that subsequently occurs as a sort of reaction. This shutting off of the blood supply and the exterior congestion that follows has been the basis for the several explanations that have been offered.

It seems certain that some cases are due to an allergic reaction. Predominance of women among the victims and the fact that these attacks are usually monthly in their appearance lead to the belief that these latent cases may be due to disturbance in the sex glands. It has also been recognized for many years that migraine follows a pattern of inheritance.

Wise family physicians for more than 200 years have recognized that these victims have certain personality types and, as in all diseases, the attacks occur because the total personality of the victim breaks down as a reaction to the stress and strain of life.

The concept of the mechanism of shutting off part of the blood supply through blood-vessel spasm or constriction, and the resultant exaggerated reaction with its intense congestion, suggests that drugs that constrict the circulation and so relieve or prevent congestion could help. Consequently, drugs that constrict blood vessels have been used successfully but they must be used early and they do have untoward effects that are most unpleasant and sometimes dangerous.

For nearly fifty years adrenaline has been used to constrict the blood vessels of the nose and lungs in hay fever and asthma. It has never been successful in the management of attacks of migraine. In a recent issue of the *Annals of Allergy*, the official publication of The American College of Allergists, Perry A. Sperber, M. D., of Providence, Rhode Island, reports that by using very small doses, and repeating them if necessary, he obtained better relief with injections of adrenaline than with any of the newer drugs.

In commenting upon this report, Dr. John H. Mitchell, president of The American College of Allergists, said these results are in line with the modern concept of the disease and are worthy of trial by all physicians

treating migraine. In this way, we shall discover its true worth. In the meantime, research on the part that food allergy and

ductless gland disturbances play in migraine attacks will continue in an effort to get at the underlying cause.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THE FIVE POINT PROGRAM

W. A. Dozier, Jr.
Director of Public Relations

Ever since its inception the Medical Association of the State of Alabama has worked toward an improvement in health and medical care for the people of Alabama. This is evidenced by its history and by the progress that has been made over the years. However, it was not necessary in the past to draw down the plans and aims in one statement. For example, the fact that the Association is the State Board of Health said to the public that part of the Association's program lay in that field.

But times change, and changing social and economic conditions necessitate varying approaches to the problems facing any group. Perhaps the promises made by people in the field of politics, perhaps the belief of leaders that to remain a leader one must ever increase benefits received by the group, or perhaps any of a number of reasons could be used to shed some light on how we arrived at the present situation in our social thinking. No matter what the reason or reasons we are at a point where one must state his positive program so that society may look at it and know that a social conscience operates in the minds of the group.

For one purpose or another certain people have tried to say that the medical profession had no progressive program and that its principal purpose was to stand in the way of progress. History does not seem to bear this out, but human beings cannot be expected to dig back and discover the facts. Neither can one expect some people to want to move carefully or to move slowly enough to be certain the outcome may be safely foretold. It was natural, then, that some of the derogatory statements would lodge on fertile ground.

For some time now, and especially since the Public Relations Conference last Octo-

ber, the Committee on Medical Service and Public Relations has been at work on a statement of program that would definitely look toward the forward march of progress, that would be practical and attainable if properly pursued, and that would also offer a challenge to the medical profession and to the public as well. Such a statement in the form of a five-point program has been formulated. It is realized that some people will say that the program does not go far enough, while others will say it goes too far. But by and large it is believed that most people will say it's a good program which is practical and which leads along the road we desire to follow.

With the statement of this or any other program there comes the added responsibility of implementing the program so that progress can be made. It's your program, and the Committee on Medical Service and Public Relations hopes and believes that every physician will back it to the extent of doing all he can as an individual to see that a successful completion becomes the eventual outcome. The following is a statement of the program. Let's all support it.

1. EXTENSION OF VOLUNTARY PREPAYMENT HEALTH INSURANCE

The profession feels that a strong doctor-patient relationship is necessary for the proper practice of the art and science of medicine. The Association is unalterably opposed to national compulsory sickness insurance. The Association is opposed because it feels that this form of insurance with its list practice and panel medicine will destroy this relationship. Instead of the above, the Association advocates the extension of voluntary prepayment health insurance, which at present may be obtained from Blue Cross and Blue Shield or from numerous reputable companies or group plans approved by the Superintendent of

Insurance of the State of Alabama, to cover all the citizens of the state who are able to purchase such insurance.

2. COUNTY CARE OF INDIGENTS

The medical profession recognizes the necessity to provide hospital care for indigents. The doctors still accept as a responsibility of their profession the medical care of such patients. Except in a few counties there is no provision for hospitalization of those needing this service. It is suggested that the several counties provide, under present legislation, such care. It is suggested that the counties could either buy insurance policies from reputable private companies or groups to provide for the hospitalization of indigents or set up a fund to provide per diem payments for the hospitalization of indigents.

3. INCREASED HOSPITAL FACILITIES

Realizing the necessity of increased hospital facilities to meet the needs of the public, the Association advocates a yearly appropriation from state funds to be used with local funds for the purpose of matching federal monies available under the Hospital Construction Act.

4. INCREASED PUBLIC HEALTH SERVICES

Recognizing the tremendous service which has been rendered by the public health agencies of the state and the several counties and realizing that the public health organization in many counties is skeletal, the Association advocates that additional state funds be made available to provide for adequate local health services throughout the state and that the appropriation for general health services be increased to allow for the expansion of public health programs in tuberculosis control and cancer control. The Association is interested also in programs designed to relieve crippling deformities and expresses the hope they may be adequately financed.

5. EXTENSION OF MEDICAL AND ALLIED EDUCATIONAL FACILITIES

Presently the Medical College of Alabama graduates fifty (50) men per year. This does not meet the medical needs of the people of this state. The Association recommends that the facilities of the Medical College be increased so that one hundred (100) doctors may be graduated each year. Thus the necessary practitioners of medicine in the state of Alabama may be provided. It is further recommended that the facilities for training dentists and nurses be expand-

ed to provide the necessary personnel in these fields.

On H. R. 6000—In reading the amendments which have been offered to the Social Security Act under H. R. 6000 I was amazed at the recommendations for increased appropriations in money which are requested to be given as benefits under the various titles of the bill, as well as to increase the numbers concerned. So far as I could tell, the requests for money to support this program were increased tremendously, none were eliminated, and none were decreased. Naturally the question arose in my mind as to how all of these benefits could be undertaken without increasing the tax burden on the productivity of our citizens to meet the increasing demands for assistance, and why our citizens are willing to allow Uncle Sam to assume responsibility for their support, education, health, housing, and retirement without the necessity of any effort on their part to produce income from which these taxes are to be paid. I have not given all provisions of the Act careful study, and if I had I would not be competent to offer valid testimony concerning them. However, I do have experience and observations concerning total and permanent disability, which is Section 107 in H. R. 6000, and which will involve the expenditure of millions upon millions of dollars as a part of the Social Security program.

I do not believe that anyone would oppose rendering assistance to those in dire distress or who are in great need and who are not financially able to help themselves, either because of sickness, injury, or disease. However, the actual need must be established, with a *primary* interest centered on a program which would rehabilitate the person or persons disabled in an effort to make them self-supporting members of society. This must be the chief purpose for which contributions are made for aiding this group of our citizens. To those of us who have been in the active practice of medicine for any considerable number of years, we are aware that there are many psychological factors demanding consideration in any discussion of the determination of the presence or absence of disability. . . .

It is my belief that unemployment (which is liable to increase in this country) from a psychological standpoint will cause the development of a great many subjective symptoms which could be classed as rendering a patient totally and permanently disabled. It is true that with stimuli such as this, and others, it is almost next to impossible to determine total disability in a patient who has made up his mind and is determined to prove that he is totally disabled in order to obtain a life income from the Federal Government.

A great number of women are employed, some 18,000,000, many of whom probably would qualify for benefits under the proposed program. It is realized by those who are engaged in the practice of medicine that this would be a most difficult group to properly evaluate their claims for disability.—Paullin, J. M. A. Georgia, April 1950.

TRANSACTIONS OF THE ASSOCIATION

1950 SESSION

PART I

TRANSACTIONS OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA HELD AT BIRMING- HAM, APRIL 20, 21, 22, 1950.

First Day, Thursday, April 20

The Medical Association of the State of Alabama convened in annual session in the Terrace Ballroom of the Thomas Jefferson Hotel, Birmingham, and was called to order at 9:15 A. M. by the President, Dr. Frank C. Wilson.

Invocation was offered by the Rt. Rev. C. C. J. Carpenter, Bishop of Alabama.

Addresses of welcome were delivered by the Hon. Cooper Green, Mayor of Birmingham, and Dr. Karl F. Kesmodel, President of the Jefferson County Medical Society, host to the Association.

Reports of committees were called for by President Wilson and they were rendered as follows, being referred to the State Board of Censors after they had been read.

REPORTS OF COMMITTEES

Prevention of Blindness and Deafness

The Committee on Prevention of Blindness and Deafness wishes to recommend that the following criteria, which were developed by the National Society for the Prevention of Blindness, be adopted for the admission of children to the Alabama Institute for the Deaf and Blind.

1. If the vision (with glasses) in the better eye is 20/200 or less than 20/200, or if the peripheral visual field is limited to 20 degrees or less in the widest diameter, the child is qualified for admission to the Alabama Institute for the Blind. This includes children whose vision ranges down through 5/200, finger count, motion perception and absolute blindness.

2. If the vision (with glasses) in the better eye is better than 20/200 up to and including 20/70, and there is no limitation of peripheral vision, the child is qualified for admission to the partially-seeing or "sight-saving" class at the Institute.

3. If the peripheral vision is limited, but is greater than 20 degrees in its widest dimension, the child is qualified for admission to the "sight-saving" class at the Institute, even if the visual acuity is better than 20/70.

4. If the vision (with glasses) in the better eye is better than 20/70, the patient should be admitted to the normal public schools.

Note: Children who are feeble minded cannot be considered for admission.

Alston Callahan, M. D.

Chairman

Karl Benkwith, M. D.

Richard Grayson, M. D.

Mental Hygiene

The Mental Hygiene Committee respectfully wishes to call to the attention of the Association the following developments in the field of psychiatry and mental hygiene throughout the state during the past year:

(1) Approval of the Department of Psychiatry of the Medical College for a one-year residency training program in psychiatry by the American Medical Association.

(2) The expansion of the psychiatric teaching program of the Medical College to include additional instruction in clinical services and didactic work in the senior, junior and freshman years.

(3) The establishment of an all-purpose five-day per week psychiatric clinic at the Medical College and an all-purpose five half-day per week psychiatric clinic at the Bryce Hospital.

(4) The monthly publication of the Alabama Mental Health Bulletin by the Research Interpretation Service of the Alabama Polytechnic Institute under the direction of Dr. Paul Irvine.

(5) The development of educational material and the establishment of a film library by the Mental Hygiene Division with the assistance of Mr. John K. Williams, Health Educator, Jefferson County Health Department, and the State Parent-Teacher Association Mental Hygiene Committee, headed by Dr. John Hall Jones, Professor of Psychology, Howard College.

(6) The formulation of plans by the State League of Nursing Education and the State Board of Nurse Examiners, in conjunction with Bryce Hospital and the Department of Psychiatry of the Medical College, to establish an affiliate psychiatric training course for student nurses at Bryce Hospital.

(7) An investigation by the Mental Hygiene Committee of the laws of Alabama regarding mentally ill patients. At the current stage of this investigation the Committee feels that in practice the present commitment laws are satisfactory as related to the Alabama State Hospitals. However, the Committee wishes to point out that the present commitment laws contain no provision for voluntary admission or admission by medical certification that would be applicable to private mental hospitals and sanatoria. The Committee

sees no immediate need for changes in the laws but wishes to recommend that the question of voluntary admission and/or medical certification be given additional consideration.

(8) A wider interest and valuable service to the Bryce Hospital on the part of parent-teacher associations, Red Cross, and state Federation of Women's Clubs, particularly in the Tuscaloosa area.

(9) The Committee wishes to welcome the counsel of the Alabama Society for Mental Health in the planning and development of psychiatric and mental hygiene services throughout the state.

(10) The Committee would like to express its appreciation in particular to Dr. D. G. Gill, State Health Officer, Dean Roy Kracke of the Medical College, Dr. Wilmot S. Littlejohn, Dr. Benjamin F. Morton, the staff of the Alabama State Hospitals, and other members of the profession in the field of psychiatry for their encouragement, support and assistance during the past year regarding the above listed projects.

(11) The Committee would like to express its appreciation for the interest and services given to the field of psychiatry and mental hygiene by the professions of education, psychology and social work.

Frank A. Kay
J. S. Tarwater
Jack Jarvis
Chairman

Maternal and Child Health

INFANT WELFARE

The infant mortality rate has remained essentially the same for the past three years (37.7, 36.7, and 37.3 for the years 1946-48). The rates under one month were 26.7, 25.2, and 25.8. This is continued evidence that our chief attention must be focused on the prenatal period, particularly the incidence and treatment of prematures. A premature unit has been functioning successfully at Tuskegee for several years. Plans for such a unit in Birmingham have been slow in materializing but at present seem about to bear fruit.

In 1948 there were no cases of smallpox reported in the state. In the same year, there were 614 cases of diphtheria with 37 deaths—almost double the 358 cases reported in 1947. Both smallpox and diphtheria are preventable. Greater efforts must be exerted in wiping out diphtheria by proper inoculation. The individual physician, as well as the various health units, should concentrate on this problem.

It should be brought to your attention that whooping cough can be very successfully treated with chloromycetin. In 1948 there were 68 deaths from this disease. Proper early treatment should eliminate these deaths.

The State Department of Health is now furnishing a triple vaccine for the prevention of diphtheria, pertussis and tetanus. The increased use of this preparation is urged.

In Jefferson County some experimental work is being done with "B. C. G." vaccine in the control of tuberculosis. No report is yet available.

The report of the American Academy of Pediatrics, Study of Child Health Services in Alabama, should be read by every member of the Association. It is very instructive in showing the status of child care in the state, with particular emphasis on the areas where there is insufficient supervision. Since the physicians of the state made this report possible, you should study it and follow the recommendations for improved care. A copy may be obtained from the State Health Department.

Through joint efforts of state, county, and volunteer health agencies, and the National Foundation for Infantile Paralysis, 84 cases of acute poliomyelitis were managed in the polio ward of the Jefferson-Hillman Hospital. The year 1949 was particularly difficult because of the higher incidence of bulbar cases. Plans are now in process for improving the services to polio cases during the coming year. The Departments of Pediatrics and Medicine of the Medical College of Alabama deserve a great deal of credit for their cooperation in this project.

Recommendations: That more effort be exercised in the care of prematures; and that the State Department of Health push through to completion the plans for the premature in Birmingham.

MATERNAL WELFARE

The contributory factors in maternal mortality in Alabama remain unchanged. These factors have been fully enumerated in previous reports. Although our state maternal death rate has been lowered, we take no pride at all in informing the Association that in 1947 *Alabama had the highest maternal death rate in the United States*. Toxemia is still the most frequent cause of death and this in itself is a reflection on our state because toxemia can be definitely recognized and controlled by adequate antenatal care. Such care of indigents is a county and a community duty and is one professional commodity that each county medical society can provide. At present 27 of our Alabama counties still refuse to provide this most essential service. The State Department of Health is able and willing to do its part and funds are available with which to pay local physicians for this needed work. The continued indifference and actual opposition of some medical societies reflect no credit anywhere. Opportunity for correction still exists.

No amount of antenatal care will ever solve the problem of lack of professional care at delivery in many of our counties heavily populated by Negroes. It is wishful thinking and useless optimism to expect the few white physicians in such counties to deliver such Negro indigents. (The Medical College of Alabama will never help here.) Negro physicians are nonexistent in such counties for obvious economic reasons. There can be no immediate solution for this problem by our present methods, and corrective

suggestions to date have been discouraged because of their necessary departure from old orthodox ideas. Payment to any physician for service to indigents is not "socialized medicine" and never will be. We are not being paid for such care now and in some counties this care is not being given and never can be by present methods. As long as the spectre of socialized medicine is raised as a roadblock to any constructive suggestion regarding the maternity problems of some of our counties, just that long will Alabama likely remain the "here we rest" (on the bottom) state in maternal death rate.

Until we can agree upon some solution for the above problem, Negro midwives seem to be a necessary evil in many counties. Inspect our 5-year exhibit for confirmation of this statement. It thus seems logical to this Committee that some real effort should be made to improve the standards of midwifery. We have real reason to doubt the effectiveness of the present system of delegating midwife control to each county health officer. This Committee also suggests consideration of some plan of "kindergarten instruction" of midwives by (1) specially qualified public health nurses or (2) any qualified physician. Attendance at this course could be made a requisite for annual license. If midwives are necessary, should we not make some effort to improve their standards? Our state ranking (on the bottom) suggests that we should do *Something*.

It is not enough for us merely to condemn socialized medicine; we must admit that our present system has some flaws and that we should seek proper correction of these flaws. One field long overdue for this corrective action is that of maternity care of indigents in many of our Alabama counties.

Recommendations:

1. A careful inspection of our exhibit on causes of just why Alabama is truly the "here we rest" state in maternal mortality.

2. A sincere request to our 27 county medical societies, now indifferent, to effect early establishment of needed antenatal clinics for indigent maternity patients of any color.

3. A sincere understanding by the State Board of Censors that this Committee is 100 per cent opposed to socialized medicine. We hope to present plans during the coming year relative to adequate professional care of indigent maternity patients now not being given. Departure from former methods should not be, and we sincerely hope will not be, interpreted as indicating sympathy with efforts at socialized medicine.

4. A careful consideration by the State Health Officer of the feasibility of our suggestions relative to midwife control and midwife instruction.

T. M. Boulware, M. D.
Chairman

Hughes Kennedy, M. D.
A. E. Thomas, M. D.

Anesthesiology

This report marks the third year of the existence of the Committee on Anesthesiology and the end of the tenure of office of its Chairman. We are pleased to report that there are now in Alabama twice the number of physician anesthesiologists as there were at the beginning. However, this does not mean that the number is adequate, and constant efforts are being made to promote and encourage the increase in number.

Members of the Committee have availed themselves of more opportunities this year than ever before to speak before seminars and county and district medical meetings.

Thus far, the response and requests for the available short term and individualized courses in anesthesia have been somewhat discouraging. Again, we would like to call to the attention of the Association the availability of such courses at the Medical College of Alabama and at the Employees' Hospital, Fairfield. We would like to enlist part-time physician anesthetists and any other physicians interested in this field in any way to take part in these courses. Courses and demonstrations can be arranged for varying periods of time. In other words, they can be suited to meet the desires and wishes of the physician.

It is still our endeavor to obtain other full-time qualified anesthesiologists for our state and to try to make available more locations for practice.

E. B. Robinson, Jr., M. D.

Chairman

Alice McNeal, M. D.

Sid W. Collier, M. D.

Postgraduate Study

ACTIVITIES

With the approval of the Board of Censors and the Association membership, the Committee's plan of postgraduate instruction through organization of postgraduate assembly groups within the various counties was instituted.

Cooperating with the Committee in this program were the Medical College of Alabama, through its Postgraduate Seminar Committee, the Extension Division of the University of Alabama, through its representative, Dr. J. R. Morton, and the county medical societies in whose areas assembly groups were held.

From May 12, 1949 through March 23, 1950, nine assemblies, with an average attendance of twenty-eight, were held. These were respectively designated as the Black Belt, Fayette, Winston, Franklin and Marion, Walker and Cullman County Postgraduate Medical Assemblies. A total of twenty-seven physicians from the faculty of the Medical College of Alabama constituted the instructional staff. A question-answer period of one hour followed each program. Meetings of this type received the interest and enthusiastic cooperation of the assemblies to the complete gratification of the lecturers.

One of the distinct features of this newer program was the fact that the subjects presented were selected by each assembly and subsequently presented by a specialist in the field of the subject selected. Among the subjects presented were: The Medical Aspects of Diarrhea in the Adult. Diarrheas in Infancy and Childhood. The Endocrine Role in Rheumatoid Arthritis. Differential Diagnosis of the Commonly Encountered Arthritides. Treatment of Rheumatoid Arthritis. Osteoarthritis and Gout. Occipitoposterior Positions. Allergies in Children. Coronary Occlusion. Acute Liver Diseases. Ascites and Chronic Liver Diseases. Surgery of the Liver and Biliary Passages. Diagnosis and Treatment of Leukorrhea. Office Management of Irregular Uterine Bleeding. Carcinoma Prevention and Detection in the Female. Traumatic Surgery as Done in the Office. Simple Fracture Work as Done in the Office. General Considerations in the Practice of Obstetrics. Anesthesia in Obstetrics. Occipitoposterior Position and Its Management. Practical Problems in Infancy and Early Childhood. Anorexia. Diarrheal Diseases. Communicable Diseases.

By November 30, 1949 total expenditures amounted to \$1,131.00. With only the \$1,000.00 appropriated by the Association and \$114.00 collected in fees, a deficit of \$17.00 existed together with outstanding commitments made to assembly groups. At this period, the State Health Department, through the cooperation of the State Health Officer, Dr. D. G. Gill, made funds available for continuing the program through payment of individual vouchers to lecturers covering travel and honoraria.

Detailed statement of finances to date is shown below:

Receipts

Association appropriation	\$1,000.00
Assembly fees	404.00
Total	\$1,404.00

Disbursements

Supplies	\$ 5.85
Postage	8.60
Telephone	1.10
Secretarial aid	200.00
Honoraria	885.00
Travel	40.00

	\$1,140.55
Balance on hand	263.45
	\$1,404.00

Vouchers honored by the State Health Department

Honoraria to lecturers	\$ 400.00
Travel	30.00
Total	\$ 430.00

Total Expenditures

Association appropriation	\$1,000.00
Fees from assemblies	140.00
Individual vouchers (S. H. D.)	430.00
Total	\$1,570.00

RECOMMENDATIONS

Based upon reactions of assembly groups, your Committee and the Postgraduate Seminar Committee of the Medical College of Alabama are of the opinion that the present method of postgraduate instruction surpasses any given in the past.

Plans for continuation and expansion of this program during 1950-51 have been made. Requests from assemblies are already on file.

The two Committees responsible for fostering these programs recognize the need for an increased appropriation by the Association for 1950-51 in order that the present program may be expanded to make possible more frequent assembly meetings in areas that have already been scheduled, and to organize and serve those in areas not formerly included in the program.

The Committee, therefore, recommends a continuance and expansion of its present program, and, for this purpose, requests that the Association, through its Board of Censors, increase the annual appropriation from \$1,000.00 to the total sum of \$2,500.00, said amount to be turned over, as in the past, to the Medical College of Alabama to be administered through its Business Manager in order to meet expenses as they occur.

That, as in the past, an annual accounting for the fiscal year ending April 1st be made by the Medical College to the Association through the Chairman of the Committee on Postgraduate Study; that any unused balance at the end of the fiscal year accrue to build a reserve for future program expansion.

That total available resources for the year be realized, and, for convenience in meeting commitments, it is recommended that the total appropriation for the year be made by the Association in preference to a partial one supplemented later by the State Board of Health.

The Committee expresses grateful thanks to the Postgraduate Seminar Committee, participating faculty lecturers of the Medical College of Alabama, Dr. J. R. Morton, representing the Extension Division of the University of Alabama, and the various county assembly groups for their unified interest and cooperation in these programs. Similarly, we thank the Health Officer, Dr. D. G. Gill, for supplementary financial aid in time of need and the State Board of Censors and the Association membership for their financial appropriation and sympathetic support in the entire project.

Ralph McBurney,
Chairman
Cabot Lull
Alfred J. Treherne

Cancer Control

In reviewing the activities of a committee for the previous year, preparatory to drafting its annual report, one is often impressed by the meager accomplishments and at the same time the numerous opportunities for service that have not been utilized. What has been done is often over-shadowed by what should have been done. We are conscious of this fact in our report today. The cancer control program has made fairly satisfactory progress during the past year, yet has fallen short of the goal set for it when the first legislative appropriation was made available in 1943. Your Committee assigned to this important work realizes its limitations but feels a justifiable pride in certain accomplishments in the way of professional education, which it desires to emphasize in this report.

Your attention is called to an important meeting held in Birmingham last July when representatives of the Alabama Division of the American Cancer Society and the Cancer Control Committee, met in conference with a group of physicians from over the state, invited because of their special interest in the problem of cancer. The purpose of this meeting was to evaluate the cancer situation in Alabama and to understand better what was being done, in this field, by the Cancer Division of the State Board of Health, and other agencies interested in this disease. The conference was advantageous and developed many important suggestions for improving our program. It seems desirable to have similar meetings during the coming year.

CANCER RESEARCH

While this Committee has no direct part in cancer research in Alabama, it is appropriate to call the Association's attention to what is being done in this field. The American Cancer Society has invested over \$250,000.00 in research in Alabama during the past two years. This work is now in progress at the Alabama Polytechnic Institute at Auburn, and the Southern Research Institute, the Baptist Hospital, the Alabama Medical College, and the Tumor Registry in Birmingham. Your Committee attended the formal opening of the Research Laboratory of the Medical College, located in the Public Health Building in Birmingham, and was greatly impressed with the equipment and plans for research in the field of cancer. Greater interest should be manifested by our physicians in this type of activity in the cancer control program.

CANCER SEMINAR

A very successful cancer seminar was held in Birmingham in February of this year. Eminent specialists presented the various phases of the cancer problem. During the three-day session, a large number of Alabama physicians, and many from out of the state, registered for this seminar. It was regretted that more of our physicians did not take advantage of this unusual opportunity. Our Association is indebted to the American Can-

cer Society for making this seminar possible. Likewise, our appreciation must be extended the State Commander of the American Cancer Society, Drs. Karl Kesmodel and Roger D. Baker, the special committee on program arrangement and the Medical College for their part in this seminar. It is hoped that similar meetings will be planned for the future. We want to recognize the work for the Medical College in giving special cancer instruction to its Senior Class as a valuable contribution to the state cancer program.

CANCER ISSUE OF THE JOURNAL

In keeping with the suggestion this Committee made in its report to the Association last year, the April issue of our State Medical Journal was published by the Cancer Control Committee. Since this month is nationally regarded as the time for special emphasis on the cancer problem, the April issue of our Journal affords an excellent opportunity for reviewing our own situation and for presenting reports to show what the State Board of Health has done for cancer control in Alabama. It is hoped that such a plan will become a permanent part of the activities and duties of the Cancer Control Committee. We take pride in this first Cancer Issue of the Journal and invite your comments and suggestions. Our appreciation is extended to the editor, Dr. Douglas Cannon, who has been most cooperative in this activity.

We desire to recognize the excellent work that has been done by the Alabama Division of the American Cancer Society during the past and previous years. The Committee recommends that the Association express its approval and appreciation to Mrs. Lillian G. Meade, the State Commander, and the entire state organization for the enthusiastic, effective, educational and service program carried out during the past year. We would urge a closer co-operation of the medical profession with this splendid medical ally in the field of cancer control.

The State Cancer Division, under the direction of Dr. W. H. Y. Smith of the State Board of Health, has been functioning as best it could, with limitation of facilities and curtailed financial support. His report in the April number of the Journal is enlightening. The State Health Officer, Dr. Gill, also has a valuable contribution on cancer in this issue. There is potential value in the recently enacted law providing for mass cancer surveys, which will become an added responsibility of the State Health Department when funds are made available for its operation. There is need for enlargement and strengthening of the Cancer Division of the State Department of Health. Some thought must be given to the problem of terminal care, as well as detection and adequate treatment of the early cases of cancer. The ever-increasing need for more effective cancer control, the growing interest on the part of the public, and the professional reaction to this opportunity are appeals that should

challenge the best leadership and planning on the part of our State Medical Association.

John Day Peake
John L. Branch
Roger D. Baker
French H. Craddock, Jr.
J. P. Chapman
Chairman

REPORT, ALABAMA DIVISION
AMERICAN CANCER SOCIETY
MRS. LILLIAN G. MEADE
STATE COMMANDER

April, as you know, is cancer control month, so designated by a special Act of Congress. At that time we do ask the general public—and that includes you—to support the American Cancer Society's drive for funds. This year we are asking for \$150,000, and I am sure that there isn't an individual who does not feel it a privilege to contribute to this worthwhile cause. Fund-raising is necessary insofar as it enables us to conduct the program we have laid out for Alabama.

I wish that Alabama could set a record of a contribution—even as small as \$1.00—from every physician in the state. I can think of nothing that would spur our workers on more than an announcement of this sort. Won't you take it under consideration?

One of the unique features of our fund-raising campaign this year will be Coffee Day. This is the third year we have used this means of promotion. The idea originated in Mississippi. Won't you on April 25th invite your friends to have a cup of coffee in the morning and again in the afternoon, and make your contribution to the American Cancer Society? The restaurant will give coffee, cream and sugar and the service. You pay what you want for your cup of coffee, and the proceeds go to the American Cancer Society.

I believe that the American Cancer Society, Alabama Division, can report continued progress during the past year in the field of education and in support of research projects. As you know, through volunteer workers this educational program is carried by radio, newspapers, magazines, outdoor advertising posters, street car and bus cards, distribution of literature, school programs, and innumerable talks to civic groups. We sincerely believe that this has resulted in a greater interest in cancer control by the lay public.

We have continued our twelve-month educational program, but also are furnishing transportation for indigent cancer patients to the state-aid clinics, when this seems advisable. We are also furnishing medicine for indigent cancer patients when requested by the patient's own physician. We also furnish bandages and dressings directly to indigent cancer patients whenever called upon to do so in each county in the state.

I would call your attention to the fact that, while we are paying bills for medicine for palliative treatment for indigent cancer patients, we

are very careful to have the bill signed by the doctor giving the prescription before it is oked for payment by me.

In each county we have had what we call a public information committee made up of representatives of press, radio, men's and women's organizations, rural groups, schools, etc. We plan for the next year to give special attention to rural groups through the cooperation of Mr. P. O. Davis, Director of Extension Service, Alabama Polytechnic Institute. The University of Michigan shows that rural people are less aware of facts about cancer than any other group in the United States.

The American Cancer Society is furnishing funds for an extensive research program in Alabama. A brochure, "Cancer Research In Alabama," a copy of which was sent every physician, has met with splendid response in the state because it shows the lay, as well as medical groups, what is really being done in our own state of Alabama. As you will note, during the past two years the American Cancer Society has spent over \$250,000 on cancer research alone in our state.

As you know, 25c out of every dollar raised is allocated to research, but in addition the Alabama Division has contributed more than this, which accounts for the splendid research program being carried on in the state. We hope that you will give this wide publicity.

This year the American Cancer Society, Alabama Division, felt that it was able to do something in the field of professional education and the first cancer seminar in which it had a part was held in Birmingham in cooperation with the Medical College of Alabama and the State Medical Association.

Insofar as splendid personnel and publicity were concerned, it was a great success, but insofar as the attendance of doctors in this state, we do not consider it a success. We feel that such an opportunity to be afforded the medical personnel of Alabama should have been better attended. We will appreciate any suggestions that will come from the medical group as to the improvement or changes that should be made in sponsoring an occasion of this sort in the future.

We have available in our office two medical films "Cancer of the Breast" and "The Problem of Early Diagnosis," and we have advised the medical groups over the state of their availability for showing. There has been very little response for the use of these films. We know that the educational program of the American Cancer Society has resulted in making the lay citizens more cancer conscious. But we also realize we have placed a great responsibility on the medical profession, and it is difficult for us and for you who have worked with us to explain to the lay person who seeks a physical examination, especially with reference to cancer, why there are physicians who say "go home and don't be worried—these cancer people are just making you have cancer phobia!" Of course I always recall

what one doctor said to me: "Don't be alarmed over things like that—I've never buried a patient from cancer phobia yet!" But nevertheless I would like to emphasize, in the most sincere manner possible, that when an answer like this is given to a patient there is a tremendous responsibility on all of us when later on that patient is found to have cancer.

During the past year the State Commander has traveled some twenty-two thousand miles by car, train, plane and bus. I have attended one hundred and thirteen meetings to represent the American Cancer Society, and have made approximately one hundred talks to men's and women's groups over the state. Literally thousands of talks have been given by doctors and Field Army personnel in addition to this. Civic clubs have been most anxious to have programs on cancer, and we have done our best to fill this need.

I would earnestly suggest that each of our medical societies have a program on cancer during the next year. We would be very happy to work with you in any way possible.

Posters on bulletin boards for industrial firms have been used extensively during the year. Mail enclosures have gone out through department stores, laundries, pharmacies, business concerns, etc., calling attention to the 7 danger signals of cancer.

It should be noted that the work of the American Cancer Society is always under the supervision of the Cancer Committee of the Association. We in Alabama are especially cognizant of our responsibility in working with the Association, and the cooperation of the State Health Department.

We still feel very strongly that a much better program in cancer control would result if there were a full-time director of cancer control in the State Health Department. In those states where such a director is employed the results are outstanding.

To all of the doctors of the state with whom I've had the pleasure of working—especially the members of the Executive Committee—I want to express my sincere appreciation. In most instances they have been extremely cooperative.

The American Cancer Society earnestly asks your advice, your suggestions, and your help for a better cancer control program for Alabama.

Tuberculosis

Last year this was a report of the new Tuberculosis Committee but this year it is a report of the same old Tuberculosis Committee.

During recent years significant progress has been made in the fight against the great plagues, cripplers and killers of the past and a number have been brought under control with the new chemo-antibiotic drugs. The efficacy of antisyphilitic therapy with penicillin has brought

about a reversal of the old adage of "fifteen minutes on Venus and forty years on Mercury" to "fifteen minutes on Venus and ten days on penicillin."

Early reports with the use of streptomycin and other antibiotic and chemotherapeutic drugs in the treatment of tuberculosis gave hopeful encouragement to the possibility of a similar miracle drug that would revolutionize the treatment of tuberculosis as did penicillin in the treatment of syphilis. While streptomycin has a definite place in the treatment of certain forms and manifestations of tuberculosis, those of us who are actively engaged in the field of treatment realize its marked limitations in the treatment and cure of pulmonary tuberculosis.

With this partial failure of the chemotherapeutic and antibiotic drugs, we must again return to the slow and time-honored procedures of prevention and treatment in the control of tuberculosis. Lessening of the venereal disease load in the state of Alabama should allow more time for the health departments, various clinics and doctors to devote to the control of tuberculosis. At present this is our only avenue of attack.

IS TUBERCULOSIS STILL IMPORTANT?

Much has been written and said in recent years about the great progress we continue to make toward the conquest of tuberculosis. Certainly there are good reasons for a feeling of satisfaction and pride in what has been achieved. Yet it is necessary, also, from time to time to survey our deficiencies and to consider the newer concepts as a means for correcting them, if satisfactory progress is to continue.

Tuberculosis is still a problem and is a major cause of death in our state, although provisional statistics indicate a lowering of the mortality rate from 33.0 in 1948 to 29.2 in 1949.

The importance of this disease as a killer is well borne out by figures which reveal that the disease advanced from 8th place to 6th place in the ten major causes of death during 1949. (See Table 1.) There are still more deaths attributed to tuberculosis than there are for deaths from all other contagious diseases combined. The year 1949 saw a further decline in the tuberculosis death rate which has been steadily declining for several years. As a point of comparison in the progress in combating tuberculosis it is noted that the 1949 provisional rate of 29.2 per 100,000 estimated population is only slightly more than one-third of the death rate in 1929 or twenty years ago.

Referring to the final figures prior to 1949 it will be noted that comparisons by race and sex are continuing the familiar pattern; namely, higher mortality among colored persons than among whites and a higher mortality among males both white and colored.

Table I
ALABAMAThe Ten Major Causes of Death, 1949,
With Rates per 100,000 Population

	1949		1948		1944-1948	
	No.	Rate	No.	Rate	No.	Rate
Diseases of the heart.....	7,703	248.4	6,446	210.1	5,611	186.9
Vascular lesions of central nervous system.....	2,913	93.9	2,687	87.6	2,499	83.2
Malignant neoplasms.....	2,791	90.0	2,725	88.8	2,435	81.1
Accidental deaths.....	1,670	53.8	1,912	62.3	1,883	62.7
Pneumonia, all forms.....	952	30.7	1,190	38.8	1,224	40.8
Tuberculosis, all forms.....	907	29.2	1,011	33.0	1,130	37.6
Nephritis and nephrosis.....	764	24.6	2,018	65.8	2,038	67.9
Immaturity.....	750	9.0	1,054	12.4	976	12.3
Homicide.....	417	13.4	468	15.3	407	13.6
Diseases of the arteries.....	346	11.2	247	8.0	270	9.0

Tuberculosis control activities of the diagnostic clinics were expanded only slightly during 1949 and the results of this expansion were reflected in an increase in the number of individuals x-rayed but not in the number of new cases found. As a matter of fact, fewer new cases of tuberculosis were discovered as is evident in the following comparison.

Year	No. X-Rayed	No. New Cases
1947	72,736	3,051
1948	199,244	2,773
1949	212,751	2,624

It is of particular interest to note that 20,000 teachers were x-rayed in this latter group.

Valuable consultation service in the reading of x-ray films of private physicians revealed a significant increase: 1947, 283; 1948, 333; 1949, 594.

An efficient central tuberculosis case register was completed during the year of 1948 and local case registers were set up in all counties during 1949 in order to keep all known cases of tuberculosis under strict observation. This has proved to be a valuable service to the health departments and the physicians, especially where there has been a change of residence from one location to another.

Recently, we learned that the state has just purchased two new photo-roentgen units to be used extensively in buses for the accelerated mass survey work. This should result in the discovery of a greater number of early cases of tuberculosis in a stage more amenable to treatment.

Only six new tuberculous beds were added in 1949. They were surgical beds added to the Jefferson Hospital. A comparison of the following figures reveals that the various sanatoria over the state operated at reduced capacity. This was probably the result of the decrease in state subsidy during the year.

Date	No. Beds	No. Hosp. days
1947	668	200,632
1948	668	217,621
1949	674	213,676

Last year the Committee strongly recommended that the diagnostic clinics speed up reporting to physicians, and presented a plan whereby

this could be accomplished by immediate typing and mailing of reports to the physicians and the health departments of all positive cases, promptly after reading by the examiner. The bureau director assures me that this will be accomplished in the near future. This simultaneous early approach by the doctor and the health department should result in immediate hospitalization of patients before their disease becomes too extensive or their lungs become adherent to the chest wall. This change alone should result in the saving of many lives and the reduction of long dreary days spent on the cure.

It is the unanimous opinion of the Committee that the Tuberculosis Control Division is doing an excellent job under severe handicaps.

SANATORIUM BEDS

Latest figures reveal that Alabama now has in the neighborhood of 674 beds in eight tuberculosis sanatoriums scattered over the state. According to the new minimum standards and the U. S. average, Alabama should have two beds per annual death, and at the present time we have only one bed per annual death. In 1949 we had 907 deaths which, according to the old standard, would indicate the need of 1814 beds to meet the minimum requirement. However, with careful planning under our present system of hospitalization and clinic care, we feel that the job can be adequately accomplished with 1500 beds. During 1950 the tuberculosis menace should begin to take a harder licking as this appears to be the banner year for greater efforts.

The 2-million dollar bond issue passed on December 13, giving the state permission to issue bonds for hospital construction, should provide the impetus for securing these 1500 beds by 1953. The total amount available with passage of the bond issue and federal and local participation will be \$12,000,000—one fourth of which is earmarked to build tuberculosis sanatoria. We will see an accelerated drop in death rates with the erection of more tuberculosis institutions.

A strong element of complacency exists in regards to sanatorium construction because of a lack of adequate state subsidy for operation of these additions.

STATE SUBSIDY PLAN

State subsidy continues to fluctuate from \$1.20 to \$1.50 per diem because of insufficient funds in the state appropriation and the fact that some institutions are operating at a greater capacity. The state should assume at least half the cost of a patient's hospitalization and a minimum of \$2.00 per patient day is advocated, which should be assured by an adequate appropriation to take care of additional beds.

SURGICAL SERVICE FOR DISEASES OF THE CHEST

Last year the Committee pointed out the need of a department for surgical diseases of the chest and had hoped that the Medical College of Alabama would create such a division during 1949.

This is a dream which might still come true since the Health Officer of Jefferson County, Dr. George Denison, has visions of a 200-bed tuberculosis section to be added to the Medical School. It is still in the formative stage, but, knowing George as I do, I believe that it will become a reality in the not too distant future. Until then, the newer concepts of lobectomy and pneumonectomy in the surgical treatment of tuberculosis must be neglected and it will be necessary for us to continue with the old time-honored procedures of thoracoplasty, extra-pleural pneumothorax, pneumonolysis, etc. George has a splendid idea in his 200-bed addition to the Medical School as these beds can revert to general hospital beds as tuberculosis vanishes.

ALABAMA TRUDEAU SOCIETY

There are approximately forty physicians who are active members of the Society at the present time. At the annual meeting in June 1949, which was held jointly with the meeting of the Alabama Tuberculosis Association, the following officers were elected for the incoming year: Dr. L. O. Davenport, President; Dr. William Grosfeld, Vice-President; and Dr. R. E. Harper, Secretary-Treasurer.

Dr. John Barnwell, Chief, Tuberculosis Division, Veterans Administration, Washington, D. C., gave a most interesting talk on "The Limitations of Streptomycin."

RESEARCH IN TUBERCULOSIS

Aside from the vast amount of information gained through research, the stimulating effect it produces on physicians is of equal or greater importance. The Committee is still unaware of any research projects in the field of tuberculosis being conducted at the present time in the state of Alabama. It is again respectfully suggested that the State Board of Health and the Medical College investigate the possibilities of such a project and then seek funds from various organizations, such as the N. T. A., U. S. Public Health Service, Rockefeller Foundation, etc., to carry on such studies. The Medical College needs such a project to round out its teaching facilities and to interest young doctors in the field of tuberculosis. It would be a part of their medical education which is too often neglected.

RECOMMENDATIONS

1. That we favor the provision of public funds and the adoption of an accelerated plan for an all-out attack on tuberculosis because of its constant threat to public health.

2. That the State Medical Association, through its high professional standing, lend all of its resources in the raising of local funds to match already existing state and federal funds for adequate tuberculosis hospital construction, the greatest need. (1500 beds by 1953.) Local funds must be assured during 1950 to match the \$500,000 state funds voted by the people last December. If local action is not taken this year, the money will revert to general hospital construction.

3. That action be taken to provide money to care for and treat patients occupying the present existing beds and those to be built, through an increase in state subsidy to \$2.00 per day.

4. It is the belief of this Committee that one important step in the fight against this disease is the provision of funds for research and teaching fellowships at the residency and the specialty levels of training. The Medical College and the State Health Department should exhaust every possibility in securing these funds.

5. That the State Health Department anticipate the need for an accelerated tuberculosis control program and set up the machinery for its operation.

If we are to justify the trust and heritage which the lawmakers, in their greatest wisdom, invested in the Medical Association of the State of Alabama, we must devote a greater proportion of time to the eradication of diseases which continue to destroy the lives of its citizens. This is a responsibility which should be shared by every member of the Association and not dumped into the lap of Dr. Gill and the State Health Department for complete disposal.

Paul W. Auston,
Chairman

L. O. Davenport
A. H. Russakoff

Medical Service and Public Relations

The activities of the Committee on Medical Service and Public Relations during the past year have been directed toward enlarging our work as stated in the original program, which was presented to you earlier. Our main emphasis has continued to be within the profession and toward better motivation of the physicians, the Committee at its first meeting after the last annual session having decided that this was our proper function at the present.

The Director of Public Relations attended the American Medical Association meeting in Atlantic City last June. It was his first attendance at such a meeting, and from it he learned much about the workings of the national organization. While there he was also helpful in handling some of the details which followed the honor bestowed on Alabama's Dr. Seale Harris.

The first real test of the efficiency of our system of county society public relations committees working with the state committee came during the summer. The President's Reorganization Plan Number One for reorganizing the executive branch of the national government was recognized as being a potential danger to the medical profession and the system of medical practice followed in America. A scattergram which encompassed the whole state was prepared, and the various county societies' public relations committees were asked to get local people to telegraph and write our national Senators stating opposition to the proposed measure. Well over one hundred telegrams, telephone calls, and letters went to our Senators. These expressions

came from people in all walks of life and were from individuals all over the state. The results speak for themselves.

For some time the Committee had been planning a public relations conference aimed at (1) disseminating information to the county society public relations committees, (2) allowing the physicians an opportunity to ask questions and make suggestions on our program, (3) forming a closer alliance between the state and county groups, and (4) motivating the physicians in general. Therefore the presidents of the county societies and the chairmen of county society public relations committees were invited to attend a conference in Montgomery on October 9. To this meeting came upwards of fifty physicians to participate in a program which contained the following discussions: the Washington Scene, Alabama Legislature and Problems Still Unfinished, Costs, Night and Emergency Calls, Motivation of the Profession, a Grievance Committee, a Health and Medical Care Council, the Medical Auxiliary, and Extension of Voluntary Health Insurance.

The conference members also passed a resolution requesting the Committee on Medical Service and Public Relations to formulate a statement which could be given to the public and which would set out the program that the physicians of Alabama are pursuing in the fields of medical care and public health. That statement, which received much careful thought, has been approved by the State Board of Censors and has been published in the folder which was handed to you at registration. It is submitted to the Association for its approval. It is felt that such a statement as this will be of great value, for now the Association has a positive program that is spelled out in words and not just an unstated program which the public could so easily be lead into believing does not exist.

It was suggested to the county societies that a social meeting with our national representatives might be of value in showing our appreciation to them and in allowing an opportunity for exchange of ideas between the representatives and the local people. At least four of these were instituted and were considered valuable by those who participated. Other societies sent some of their members to talk with their Congressmen, and many individual physicians made a point of calling on their representatives while they were back in Alabama during the congressional recess.

In company with Dr. Douglas L. Cannon, the Public Relations Director attended the Annual Public Relations Conference of the American Medical Association in Chicago in November. From contacts with people from other states it was possible to evaluate, to a certain degree, our program and its progress. It is believed by the Committee that we in Alabama are doing, with our funds, a job comparable to others which in many instances are costing more. As was said earlier, our primary problem has been motivation of the individual physician. Other public relations directors and physicians who have

worked with public relations programs will admit that their number one problem is the same as ours; however, no one has any suggestion as to how to get at it and often their programs seem not to give proper emphasis to this phase of the work. We believe we are making some progress with our efforts to interest more physicians and to get them active in our program.

Drs. B. W. McNease and Douglas L. Cannon and the Public Relations Director attended, in February, the conference in Chicago sponsored by the Whitaker and Baxter public relations firm which is handling the National Education Campaign for the American Medical Association. This was a one-day meeting at which the progress of the past year was pointed out and plans for the coming year were announced. Those on the national level must of necessity work with resolutions and with groups. We in Alabama have aided them as often as possible and plan to continue such help as we can give.

The Committee has during the past year continued its work with the Health and Medical Care Council of Alabama. Under the leadership of Judge J. C. McGough of Fayette, the Council's main emphasis was put on legislative matters as related to the last meeting of the Alabama Legislature. A number of the recommendations as approved by the Association last year are now actualities. For example, Alabama now has a hospital licensure law; a Collegiate School of Nursing has been approved and is in process of being instituted, and more money is available on the state level for matching Hill-Burton funds.

At the annual meeting of the Health and Medical Care Council of Alabama it was decided that leadership in the Council should again go to the profession; therefore Dr. J. G. Daves, Cullman, was made chairman. Mr. W. A. Dozier, Jr. was made secretary of the group so that there could be a close liaison between the two offices. The Council plans during the coming year to place its emphasis on recruitment of personnel for the health fields and on increasing the number of county councils. The Committee feels that such health councils are important and hopes that the whole profession will give its support and active assistance to the extension of this work.

The Director of Public Relations has done considerable work during the year with the Woman's Auxiliary to the Medical Association of the State of Alabama and with the various county auxiliaries. The Committee desires to give recognition to the work that has been and is being done by the Woman's Auxiliary in the field of public relations. It has been more than cooperative in accepting responsibilities and in helping with our various problems. The Auxiliary is a growing organization and one on which we shall rely more and more for certain phases of our contacts with segments of the public.

It was requested that Mr. Dozier be allowed to serve as secretary to the Alabama Academy of General Practice, which request was granted for several reasons. This Committee is very inter-

ested in an extension of postgraduate study and wishes to call attention to the excellent postgraduate seminar which was conducted by the Medical College of Alabama for the Academy. Mention should also be made of the excellent work being done by other groups such as the Black Belt Postgraduate Assembly. The Committee commends these groups and hopes that more work may be done along these lines.

During the year the public relations office has continued supplying newspapers with a weekly health article under the title "Your Health." The letter, P. R. Notes, has come to you at least once a month and more often when circumstances seemed to warrant it. Monthly articles by Mr. Dozier have appeared in the Journal of the Association and contributions have been made to other publications, such as the new Alabama Hospital News. The Public Relations Director has also made upwards of sixty speeches during the year, which is an average of better than a speech a week. Over half of these speeches have been made to lay people, with the greatest emphasis being placed on men's clubs.

County public relations committees have increased in number, there now being thirty-four known committees in the state. It is felt that this number should and will grow during the coming year.

During the 1949 fiscal year expenditures have amounted to \$16,079.23. The following is a statement of 1949 expenditures, a proposed 1950 budget, and a statement of present surplus funds.

	1949 Expenditures	Proposed 1950 Budget (assuming \$15,000 appropriation)	
Salaries			
Director	\$6,000.00	\$ 6,000.00	
Clerical assistance	2,870.60	2,100.00	\$ 8,100.00
Travel Expense			
Committee	65.00	200.00	
Director	1,866.50	2,000.00	2,200.00
Printing			
Health column	220.32	300.00	
Literature and bulletins	18.36	300.00	600.00
Office Equipment	1,296.99	1,000.00	
Office Rent	720.00	1,080.00	
Stationery and Supplies	1,143.94	1,200.00	
Telephone and Telegraph	381.12	400.00	
Radio		50.00	
Postage	961.00	1,000.00	
Art		50.00	
Library	41.70	75.00	
Miscellaneous	493.70	245.00	
Total	\$16,079.23	\$16,000.00	
Unencumbered Balance		\$ 7,438.72	
Total		\$23,438.72	

Surplus Account

	Yearly Appropriation and Expenditures	Yearly Surplus
Original Grant	\$ 5,000.00	
Expenditures 4-1-47 to 12-31-47	365.88	
Expenditures 12-31-49 to 6-30-48	286.69	
Expenditures 7-1-48 to 3-31-49	1,327.76	
Expenditures 4-1-49 to 3-31-50	1,296.99	\$ 1,722.68

1948 Appropriation	14,484.50	
Expenditures less office equip. 7-1-48 to 3-31-49	8,541.22	5,943.28
1949 Appropriation	15,555.00	
Expenditures less office equip. 4-1-49 to 3-31-50	14,782.24	772.76
Total		\$ 8,438.72

The Committee feels that progress has been made with our public relations program but also knows that there is more to be done. We request your increased support during the months ahead.

J. Paul Jones Chairman	J. G. Daves John Day Peake Frank C. Wilson ex officio
J. P. Chapman	Douglas L. Cannon ex officio
E. L. Gibson	D. G. Gill ex officio
W. R. Carter	
F. W. Riggs	
Arthur Mazyck	
E. G. Givhan, Jr.	
B. W. McNease	

At this point Mrs. Arthur A. Herold, President-Elect, Woman's Auxiliary, American Medical Association, Shreveport, La., was introduced by Mrs. W. J. Rosser, President, Woman's Auxiliary to the State Medical Association, and spoke as follows:

Mrs. Herold—I am deeply conscious of the honor you have accorded me as the representative of the National Auxiliary by giving me a few minutes on your full program. I am grateful to Mrs. Rosser and to you for this opportunity to address you.

I have read and reread the reports of your President of the Auxiliary to the State Medical Association and your State Auxiliary is doing work of which you may be justly proud. Its membership in 1948-49 was 668, with 12 counties organized. This is an increase of 185 members over the preceding year.

In order for an Auxiliary to function properly, there must be unity of goal, of expression, of aim, and of action between the Auxiliary and the Medical Association. I do not know—perhaps you do work in such close cooperation with your Auxiliary, but if you have not in the past please try to do so in the future, for, as someone has said, there is magic in the phrases, the men want us to organize, our husbands are all for the Auxiliary and are cooperating with us 100 per cent.

Our immediate and urgent public relations program has for the past two years been centered around our National Educational Campaign. We were asked to accept the responsibility for four major activities:

1. An effective endorsement drive among women's organizations.
2. Participation in the work of the Medical Association's Speakers Bureau.
3. A well organized literature distribution system.
4. Newsworthy publicity to women's page editors.

This concentration of effort has stimulated our members and has made them more interested in

and conscious of the importance of our Auxiliary. While stressing the significance of this program, we have come to realize that political action should never be the sole concern of the wives of physicians. Of course, if we fail to stem the tide toward the "welfare state," there will be no need for any other type of program, but we take the optimistic view and feel that we shall continue to need to build for the future as well as for the present.

Therefore, I was very pleased when the A. M. A. suggested that we adopt its 12-point program for the advancement of medicine and public health as a basis for our long range health education projects. The implementation of this 12-point plan for the advancement of the health of the American people is of the utmost importance if the threat of political medicine is to be dissolved permanently. This is a positive program, the success of which is of personal concern to each and every one of us. It is a plan, in the completion of which the Auxiliary feels it should have a definite part.

To discuss these 12 points with you would consume more time than has been allotted to me, for about each point a 15 to 20 minute talk could be given. I should like, however, to mention briefly four of these points. I am referring to the four that I have grouped under social medicine, not socialized medicine. They are public health, mental health, chronic diseases and the aged, and health education. These four points require careful planning and coordinated activity of various and sundry groups, all seeking new answers and constantly evaluating results. This is where it seems to me that our Auxiliaries can be most effective and where they should attempt to work, always, of course, consulting and seeking the advice of their respective medical groups. Everything that the A. M. A. does is more or less along the line of health education, but our parent body feels that we should have a health education program administered through state and local health and medical organizations to inform people of the available facilities in health care and of the progress being made by organized medicine. It does no good to have facilities available if the public is not informed about them and does not avail itself of them. This is where the Auxiliary can serve as a liaison between the medical profession and the laity.

If the wives of physicians are working with other health groups, they can see that these groups receive the correct information on all phases of health education in this country and not just propaganda sent out by the administration in Washington.

Next year we shall use visual aids to assist us in arousing the interest of our own group and the laity in health education. Some of the A. M. A. officials have been contacted and they are interested and eager to help plan and supply such aids as posters, films and any other assistance we may be able to use.

Our National Auxiliary has a membership of between 50,000 and 60,000 women divided over

48 states, the District of Columbia and Hawaii. If you stop a moment and think, I believe you will agree with me that your best public relations ally is this organized, intelligent, busy group of women who are eager to be helpful to you and to assist you in every possible way in your struggle to preserve for the American people the best medical care the world has ever known.

Report of the Secretary-Treasurer

Douglas L. Cannon

MEMBERSHIP OF THE ASSOCIATION

The membership of the Association, as enrolled April 1, 1950, is 1758. Of the state's 1944 physicians, 90 per cent are identified with the Association.

DEATHS

Forty-five (45) members of the Association have died since the report of 1949 was rendered. In the number were Life Counsellors W. M. Faulk, C. A. Mohr and Lloyd Noland; and Active Counsellor B. C. Scarbrough. Dr. Mohr, who died at the age of 92, was president of the Association in 1925-26; and Dr. Noland served in that capacity in 1936-37. The complete obituary record follows:

Awtrey, H. S.	Ashville
Beck, J. E.	Mobile
Berry, R. A.	Birmingham
Branyon, A. C.	Fayette
Casey, M. L.	Henagar
Cheatham, T. A.	Birmingham
Deaver, W. T.	Adamsville
Faulk, W. M.	Tuscaloosa
Hamner, H. T.	Camp Hill
Hardin, S. T.	Tuscaloosa
Harris, H. P.	Foley
Hough, J. S.	Montgomery
Howard, P. J.	Mobile
Jenkins, J. F., Sr.	Birmingham
Johnston, Hardee	Birmingham
Jordan, H. W.	Robertsdale
Kilpatrick, L. A.	Gadsden
Leland, Joseph	Birmingham
Marlette, G. C.	Bay Minette
Lovvorn, R. C.	Newell
McInnis, W. R.	Clio
Meharg, W. G.	Anniston
Mohr, C. A.	Mobile
Morrow, R. P.	West Point
Nichols, Cobb	Jackson
Noland, Lloyd	Fairfield
Payne, B. C.	Lewisburg
Posey, B. F.	Birmingham
Posey, L. C.	Birmingham
Richey, C. H.	Valley Head
Roach, A. N. T.	Mobile
Scarbrough, B. C.	Albertville
Shanks, R. G.	Autaugaville
Shirley, J. E.	Tuscaloosa
Stacey, A. G.	Beatrice
Stanley, R. H.	Foley
Stevenson, W. W.	Roanoke
Stewart, G. E.	Fayette

Stockton, F. E.	Birmingham
Ward, H. S.	Birmingham
Watkins, M. A.	Birmingham
Whiteside, H. B.	Ohatchee
Wilson, Cunningham	Birmingham
Woodson, R. C.	Birmingham
Wren, E. B.	Talladega

THE FIFTY YEAR CLUB

This year Certificates of Distinction are to be awarded 34 physicians who have practiced their profession for fifty years and therefore become members of the Fifty Year Club. They are:

Chas. T. Acker	Montevallo
Theodore M. Blake	Mobile
Franklin A. Boswell	Elmore
Virgil O. Campbell	Billingsley
John Douglass	Birmingham
Carl Alexander Fox	Birmingham
Nathaniel S. Gay	Whistler
Robt. S. Glasgow	Adamsville
Walter A. Gresham	Russellville
Robert E. Harwood	Gainesville
Wm. Edward Howell	Haleyville
John David Johnston	Brundidge
Henry B. Klie	Forkland
James Edward Leach	Gadsden
Philip Malcolm Lightfoot	Shorter
Shelton T. Meharg	Anniston
John Calvin McLeod	Bay Minette
William C. Miles	Oneonta
Marion Ridley Moorman	Huntsville
Bernard Mount	Montgomery
Willena Peck	Montevallo
Wm. Ernest Prescott, Sr.	Birmingham
Chas. Murray Rudolph	Birmingham
Henry Graham Sellers	Birmingham
Rowell Wilbur Shaw	Gilbertown
Philip Van Buren Speir	Greenville
Henry Lee Stutts	St. Joseph, Tenn. Rt. 1
Walter Rowland Ward	Birmingham
John Edward Wilkinson, Jr.	Prattville
Wm. Claiborne Williams	Bridgeport
George W. Williamson	Bessemer
Dilimus Wesley Wilson	Ft. Payne
Lochlin Minor Winn	Birmingham
Lee Roy Wright	Heflin

A. M. A. DUES

The House of Delegates of the American Medical Association at its meeting in Washington, D. C., December 6 to 8, 1949, amended the Constitution of the Association to provide that annual dues, not to exceed \$25.00, could be prescribed for the ensuing calendar year in an amount recommended by the Board of Trustees and approved by the House of Delegates. The House of Delegates, on recommendation of the Board of Trustees, set the membership dues for the year 1950 at \$25.00; each active member to pay his dues, through the Treasurer of his County Medical Society, to the Treasurer of the State Medical Association for transmittal to the Secretary of the American Medical Association; the only ones exempt being retired members, physi-

cally disabled members, interns, and those for whom the payment of such dues would constitute a financial hardship.

Thus, for the first time in its history, the American Medical Association has found it necessary to prescribe dues for its members, an action occasioned by the increased cost of operation of the many services offered by the national organization; the need for a vigorous and constant educational campaign on a nation-wide basis; and the desire of the American Medical Association to foster the organization and expansion of voluntary health insurance plans.

It is true the members of the Association were assessed \$25.00 in 1949 (and I add parenthetically that of the Association's membership of 1748 on December 31, 1949, 934 met the assessment) but this was an assessment only and had no bearing on tenure of membership in the American Medical Association. Heretofore, a member of the State Medical Association, through identification with a County Medical Society, has been a member of the American Medical Association automatically and without payment of dues. Now, dues are necessary for membership unless one is exempt. However, attention is directed to the fact that forfeiture of membership in the American Medical Association due to failure to pay dues will have no effect on membership in the State Medical Association.

Finally, in this connection, reference should be made to the fact that there have been no changes in the Constitution and By-Laws of the American Medical Association with respect to Fellowship. Eligibility for Fellowship and annual Fellowship dues of \$12.00 remain the same. Under the present By-Laws a Fellow will pay for the year 1950 total membership and Fellowship dues of \$37.00.

It is too early to know how many of our members will continue their affiliation with the American Medical Association. Since our representation in the House of Delegates of the parent body is dependent on the number of such affiliations, hope is expressed there will not be a great loss of A. M. A. memberships in our State.

APPOINTMENT OF A. M. A. DELEGATES

Apportionment of delegates in the House of Delegates of the American Medical Association from each constituent association is one delegate for each thousand (1,000) active members or fraction thereof. It can be seen then that if active members of the A. M. A. residing in Alabama fall to 1,000 or less, our Association will have but one representative in the House of Delegates whereas it now has two. They are Dr. J. Paul Jones of Camden and Dr. C. A. Grote, Huntsville.

AMENDMENTS PROPOSED TO THE CONSTITUTION AND BY-LAWS

At the last session certain amendments were proposed to the Constitution and By-Laws of the Association and these will be returned by the Board for action at this meeting. Summarized they are: (1) to provide for a President-Elect;

(2) to give right to hold any office in the Association to a member in good standing for five years; and (3) to alter the manner of electing members of County Medical Societies.

PRESIDENTIAL APPOINTMENTS

To serve until this meeting of the Association, President Wilson appointed Dr. J. O. Finney, Gadsden, Vice-President of the Northeastern Division to succeed Dr. Frank Jordan, Huntsville, whose term would have expired this year.

As delegate and alternate, respectively, in the House of Delegates of the American Medical Association, President Wilson appointed Drs. J. Paul Jones and D. G. Gill, their terms to expire December 31, 1951.

Committee appointments were made as follows: Medical Service and Public Relations—J. Paul Jones and J. P. Chapman; Mental Hygiene—Jack Jarvis; Maternal and Child Health—Hughes Kennedy, Jr.; Cancer Control—F. H. Craddock, Jr.; Blindness and Deafness—Alston Callahan; Postgraduate Study—A. J. Treherne; Industrial Medicine—Earle Conwell; Physician-Druggist Relationships—W. M. Salter; Anesthesiology—Alice McNeal; and Tuberculosis—Paul W. Auston.

STATUS OF COUNSELLORS-ELECT

At the last meeting of the Association, four members—Jacques H. Baumhauer, J. Mac Barnes, James C. Gladney and S. Sellers Underwood—were elected Counsellors. All have qualified fully as required by the Constitution and should be added to the Roll of Active Counsellors when the revision is made on Saturday morning.

OFFICERS TO BE ELECTED

Officers to be elected at this session are a President, a Vice-President of the Southwestern Division to succeed Dr. W. R. Carter, resigned, a Vice-President of the Northeastern Division to succeed Dr. J. O. Finney, a Secretary-Treasurer, and two censors for five years to succeed Drs. E. V. Caldwell and J. O. Morgan whose terms expire.

There are to be elected, also 13 Counsellors: *From the 1st Congressional District*, 2. The first terms of seven years of J. Mac Bell and J. Paul Jones have expired. *From the 2nd*, 2. The first terms of seven years of J. O. Lisenby and F. W. Riggs have expired. *From the 3rd*, 1. Emmett T. Brunson's second term of seven years has expired. *From the 5th*, 1. B. C. Scarbrough is deceased. *From the 6th*, 3. R. C. Partlow's first term of seven years has expired. The second terms of seven years of R. C. Hill and J. V. Howell have expired. *From the 9th*, 4. The first terms of seven years of G. A. Denison, Hughes Kennedy, J. A. Meadows and J. R. Morgan have expired.

APPOINTMENTS TO BE MADE

Committees presenting vacancies because of expiration of term of members are: Medical Service and Public Relations (E. L. Gibson and W. R. Carter), Mental Hygiene (Frank A. Kay), Maternal and Child Health (A. E. Thomas),

Cancer Control (John Day Peake), Blindness and Deafness (Karl Benkwith), Postgraduate Study (Cabot Lull), Industrial Medicine (Marcus Skinner), Physician-Druggist Relationships (R. R. Kracke), Anesthesiology (E. Bryce Robinson, Jr.) and Tuberculosis (A. H. Russakoff).

It will be a responsibility of the next President to make these appointments, to name a successor on the Committee on Industrial Medicine to Dr. Benjamin Meyer who is reported as moving to California, and to designate a delegate and an alternate to the American Medical Association to succeed Drs. C. A. Grote and Geo. A. Denison, respectively, whose terms will expire December 31, 1950.

FINANCE

The accounts of the Association for the year 1949 have been audited by Crane, Jackson and Wilson, Certified Public Accountants, Montgomery, and the audit constitutes the concluding pages of this report. The only detail to be added is that of the Association's 1758 members, only 1050 pay dues, the remainder being exempt because they are Life Counsellors or members of thirty-year standing.

The Auditor's Report

The Officers and Members,
The Medical Association of the State of Alabama,
Montgomery, Alabama.

Gentlemen:

We have completed our examination of the Cash Accounts of the Treasurer of the Medical Association of the State of Alabama for the calendar year 1949, and have prepared and submit the following statements:

Exhibit "A": Summary Statement of Cash Receipts and Disbursements for the Calendar Year 1949.

Exhibit "B": Detail of Cash Disbursements for the Calendar Year, 1949.

Exhibit "C": List of Securities Owned at December 31, 1949.

Our examination included the tracing of all recorded cash receipts to the record of deposit of funds as indicated by bank statements on file. All bank checks paid during the period were examined for amount, signature and endorsement, and were vouched to the record of checks issued. Footings of the books of original entry were proved.

Securities owned by the Association, and listed in Exhibit "C", were examined by us in company with Dr. Douglas L. Cannon on February 2, 1950 at the safety deposit vault of the First National Bank of Montgomery, Alabama. During the year under examination securities with a maturity value of \$10,000.00 matured and additional securities with a maturity value of \$13,500.00 were purchased with the proceeds therefrom.

Respectfully submitted,
Crane, Jackson and Wilson
By H. C. Crane, C. P. A.

Exhibit "A"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1949

Balance January 1, 1949:

First National Bank, Montgomery, Alabama		
Checking Account	\$16,353.11	
Savings Account No. 1973	1,335.63	\$17,688.74

Cash Receipts:

Association:

County Dues	\$20,039.00	
Counsellors	2,475.00	
Roster of Association	67.00	
Redemption of United States Government War		
Savings Bonds	10,000.00	
Miscellaneous (Pictures)	12.00	
Refund on Federal Unemployment	40.00	\$32,633.00

Journal:

Advertising	\$11,271.34	
Non-Member Subscriptions and Sales	70.00	
Excess Cuts	75.26	11,416.60
		\$44,049.60

Cash Disbursements: (Exhibit "B")

Association	\$15,396.65	
Medical Service and Public Relations	15,876.13	
Journal	11,099.72	42,372.50

Excess—Receipts over Disbursements		\$ 1,677.10
Add: Balance January 1, 1949		17,688.74

Balance December 31, 1949		<u>\$19,365.84</u>
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Consisting of:

First National Bank, Montgomery, Alabama:		
Checking Account	\$18,030.21	
Savings Account No. 1973	1,335.63	
		<u>\$19,365.84</u>

Exhibit "B"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
DETAIL OF CASH DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1949

Association:

Salary—Douglas L. Cannon, M. D.	\$	600.00	
Annual Meeting:			
Expense of Lectures	\$	452.64	
Hotel Expense		167.50	
Recording Proceedings		125.20	
Badges		118.31	
Film		35.00	898.65
Printing and Stationery		1,574.65	
Postgraduate Seminar		1,740.51	
Postage		141.00	
Crane, Jackson and Wilson—Audit Fee		56.00	
Treasurer's Bond		50.00	
Refund of Membership Dues		95.00	
Lettering Fifty Year Club Certificates		6.00	
Expense of Delegates to American Medical Association		150.00	
Purchase of Bonds		9,990.00	
Bank Exchange		2.74	
Postage and Insurance on Bonds Sent In for Redemption		2.40	
Rent on Safety Deposit		6.00	
Recording Board Hearings		83.70	\$15,396.65

Medical Service and Public Relations:

Salaries—Public Relations:

W. A. Dozier, Jr.	\$ 5,700.00	
Technical Assistant	655.38	
Clerical Assistants	1,840.73	\$ 8,196.11
Payroll Taxes		70.45
Miscellaneous		328.64
Extra Salaries		133.60
Dues and Subscriptions		56.70
Express and Postage		1,123.24
Stationery and Printing		959.53
Office Supplies and Equipment		1,914.08
Travel Expense		1,960.00
Rent		720.00
Telephone and Telegraph	413.78	15,876.13

Journal:

Salaries:

Douglas L. Cannon, M. D.	\$ 600.00	
Lurette Kilpatrick	840.00	
William W. Wilkerson, M. D.	300.00	\$ 1,740.00

Printing and Mailing Journal	9,349.72	
Clerical Assistance	10.00	11,099.72

Total Disbursement \$42,372.50

Exhibit "C"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SECURITIES OWNED
AT DECEMBER 31, 1949

Number	Type	Date of Issue	Purchase Price	Redemption Value 12-31-49	Increase	Date of Maturity	Maturity Value
7	\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D191057F to D191063F inclusive	7-1-43	\$ 2,590.00	\$ 2,922.50	\$ 332.50	7-1-55	\$ 3,500.00
6	\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D220060F to D220-065F inclusive	1-1-44	2,220.00	2,466.00	246.00	1-1-56	3,000.00
4	\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D274010 to D274013 inclusive	6-1-44	1,480.00	1,618.00	138.00	6-1-56	2,000.00
3	\$500.00 Series "F" U. S. Government War Savings Bonds Numbers D385709F to D385711F inclusive	5-1-45	1,110.00	1,179.00	69.00	5-1-57	1,500.00
11	\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D386331F; D386367F to D386369F inclusive; D386-371F; D386373F to D386376F inclusive; D386378F; D386379F	11-1-46	4,070.00	4,180.00	110.00	11-1-58	5,500.00
3	\$500.00 Series "F" U. S. Government Savings Bonds Numbered D677782F to D677784F inclusive	5-1-49	1,110.00	1,113.00	3.00	5-1-61	1,500.00
2	\$1,000.00 Series "F" U. S. Government Savings Bonds Numbered M1510584F; M1510585F	5-1-49	1,480.00	1,480.00		5-1-61	2,000.00
1	\$10,000.00 Series "F" U. S. Government Savings Bond Number X355045F	5-1-49	7,400.00	7,400.00		5-1-61	10,000.00
			<u>\$21,460.00</u>	<u>\$22,358.50</u>	<u>\$ 898.50</u>	<u>\$29,000.00</u>	

Committee of Publication

Douglas L. Cannon, Chairman

The monthly circulation of the Journal at December 31, 1949 was 1975 copies, 1723 of which went to members of the Association, 93 to exchanges, 79 to advertisers and advertising agents, and the remainder to nonmember subscribers and the files of the Association.

Advertising and miscellaneous Journal receipts in the calendar year 1949 amounted to \$11,416.60. Cost of printing and distributing the Journal was \$11,099.72. Thus the publication showed a small profit.

Transactions, also, were furnished the members of the Association, and the cost of this item was \$1,058.65.

Report of Vice-President Gibson

Southeastern Division

Your Vice-President of the Southeastern Division may be classed as derelict in his duties to the Association by having failed to visit each county society in his district. Since there are sixteen or seventeen counties in the division, I felt that the great travel expense and time consumed would probably be more than most any doctor who is in active practice, trying to serve the people in his community, could afford to lose. Too, the ratio of doctors to the population in our district is probably lower than any in the state; if not the lowest, at least one of the lowest. I have heard of no instance of any doctor in our district not being busy, regardless of age.

COUNTY SOCIETIES

Counting all doctors twenty years ago, there were four hundred and nine, including colored, those retired, and public health workers. Of that number, three hundred and thirty-seven belonged to county societies. In 1949, there were two hundred and sixty doctors, with two hundred and sixteen of them belonging to county societies. Since these figures were taken from the 1929 and 1949 Transactions of the Association, you can see from our own state records that our district, the Southeastern, is a hundred and forty-nine doctors short of 1929. In that year there were three hundred and thirty-seven members of the State Medical Association in these sixteen or seventeen counties.

Today there are approximately two hundred and sixteen members, which gives us an average of about thirteen members in each county medical society. If these figures are correct, and they are, you can readily see how difficult it would be for county societies to hold regular meetings with a possible attendance of five or six members. So, I believe that I am safe in saying that the smaller county societies have not had regular monthly meetings. Three counties in this district, I am sure, hold regular monthly meetings. These counties are the ones that have the largest number of physicians in them.

Having in mind what is being done in other districts of this state, setting us an example, we have encouraged and succeeded in getting regular monthly, joint meetings of three county medical societies. The attendance has been good and the doctors have good programs. At one of these joint meetings held recently in Coffee County, all the presidents and secretaries of the societies within a radius of seventy-five miles were invited by us to hear the Secretary of our Association, Dr. Cannon; the Dean of our Medical College, Dr. Kracke; and our Public Relations Director, Mr. Dozier.

Dr. Kracke gave us a clear, concise picture of the present and future of our Medical College, and the possibility of its taking around twenty years to train enough doctors to properly supply all sections of this state, so that the people would have adequate care.

Following Dr. Kracke, Dr. Cannon discussed the work of the State Association, and especially public health work done by the Health Department of the state. All of the doctors present were impressed by his sound advice, and his review of the work done by the Health Department, as compared to twenty-five or thirty years ago.

Mr. Dozier stressed the public relations program and the duties of the doctors pertaining thereto. He especially impressed on us as a group to go to the polls and vote on all questions and candidates regardless of what our views were on them.

Outside of being members of local city councils, I believe that the doctors of our district are not taking enough interest in local and state affairs. We have no doctors, to my knowledge, in this district running for the State Legislature. In my humble opinion, we should have at least one doctor in each district in this state in the State Legislature.

Since it is not within the duties of the Vice-President to make recommendations to this Association, I hesitate to mention that there should be a training meeting of the presidents and secretaries once each year in order to stimulate more interest in county society work. If not covering the entire state, take one district, the Southeastern or any other district, and try to stimulate interest in the various societies of the district by having a meeting of all the presidents and secretaries and discuss only the duties of these offices. Maybe that would help to increase the interest among the doctors, and they, in turn, would do a better job of relations among themselves.

HOSPITALS

The number of beds for treating the sick in hospitals is increasing in this district, but not as fast, possibly, as needed. Recently a new hospital was opened with funds available locally and with state and federal aid. Two others are authorized and one other is in the process of construction. One other county has recently voted the tax for the purpose of matching federal and state funds in obtaining a local hospital.

PUBLIC RELATIONS COMMITTEE

Your Vice-President has attended almost all of the meetings of the Committee on Medical Service and Public Relations. These meetings, to me, have been very educational, and, as compared to the high type of men we have on this Committee, we have a feeling that our contribution has been very infinitesimal. This Association should be proud of the type and broad-mindedness of the Committee as presently constituted. We are indeed fortunate in having a Director who is well trained and doing a good job.

Report of Vice-President Daves

Northwestern Division

For one to follow correctly through on any problem that necessarily requires a solution, now or in the future, one must obtain all the facts available on the subject, and then one may feel unable to offer much by way of answering the question involved.

The question in mind is how best to relate our Association with a segment of society which composes no small part of the citizenship of Alabama, and as such is both contributing and consuming. This group of people has helped to make the Southland what it is and no less so Alabama. No one knows better than Southerners, both white and black, how much each owes to the other for our place in the nation today. No men anywhere are more understandingly aware of race relations problems than we of both races in Alabama. We have grown into this situation together and if the circumstances of the day need changing so that both concerned will be benefited, and those unconcerned be silenced, the know how must surely exist in the wills of those involved.

At a conference with the Negro doctors in this district it was learned that those men came through similar training schools, met the same standards of qualifications to practice, and have similar attitudes and desires found in the white doctors of our state. They have an organization, state and national in scope, which is made up of districts and states whose members have certain standards to meet before being admitted to these societies. These standards and qualifications are very similar to those set up by our own organization for its members. Although theirs is a live, active and growing institution, it is handicapped somewhat because it represents a minority influence in a very strong and progressive professional approach to better medical service to all society in this state. It seems that an intelligent and understanding recognition of this group would add strength to each and more proficiency to both. They want a place to work. They would like to have privileges of sitting in on some medical society meetings, including certain staff conferences. They want to become supportive members of organized medicine and thereby join us in the fight against socialization.

They humbly revere the traditions of the South and want them preserved. They also wish to be given opportunities to serve their race better and through such efforts elevate their standard of living along with others in the communities, believing that our state is made stronger when all classes of its people cooperate for peace and prosperity rather than strife and poverty. Because of their humility they do not desire these privileges in order to be elevated to authoritative equality with the white doctor but wish to enjoy them under his supervision and guidance.

From these findings it seems apparent that something could be done to promote a better state of affairs between the two groups of doctors. The signs of the times and the trends of thinking in this age almost make it imperative that we adjust these problems now ourselves or else ere long have them settled by directives which most of us would not appreciate.

During the year there has been increasing interest and activity concerning things medical in the district. More and more doctors have attended the seminars and more requests for such programs have been expressed. All these meetings have fulfilled a need and brought renewed interest and inspired greater determinations to give better service in our daily calls.

County medical societies have manifested a keener interest in all the problems facing them and appear to be moving toward a higher type of service in their field of action.

The profession and laymen alike are coming to a better evaluation of the benefits obtainable in prepayment plans as exemplified by the Hospital Service Corporation of Alabama.

Much apathy still exists in the field of public relations but most doctors are coming to a point of appreciative concern about the job being done by our director.

The Auxiliary is proving an effective agency in alleviating the feelings of petty jealousies that too often exist among groups of doctors. All will agree that such seed, if allowed to grow, can produce nothing of value in the fruits of our efforts.

Too, other lay groups have given active concern and voiced disapproval to this socialistic idea now trying to engulf the medical profession. For, they reason, if one is strangled, then others will be until all are strangled, thereby resulting in something entirely foreign and destructive to our way of life.

Many new facilities and people have been added to the services of the district, both for curative and preventive measures. If the lay mind will use its best thinking and regard with proper appreciation the human limitation of its doctors and others in the field of medicine, there should be no reason why any will lack sufficient attention when sick or be denied the health and happiness they need.

As has been the custom for the past few years, only one district meeting was held. Tuscaloosa, a city of culture and learning because of its great University and other institutions of importance,

furnished us the place. The Medical Society of that county, whose reputation for good entertainment and genuine Southern hospitality is excelled by none, was the host to the meeting.

Dr. Tarwater, his staff and physical facilities at Bryce Hospital furnished the best program that has ever been given at any meeting, large or small. Dr. Patton discussed many of the diseases the human mind is afflicted with and showed cases to demonstrate them to us. To see him in action as he handled these mentally sick people was an inspiration one will never forget. To observe the patients' childlike trust, faith and understanding confidence in him was an experience of heavenly characteristics. The discussion by Dr. Sam Darden of the treatment of these people was the most practical, impressive and effective known to the medical mind up to this time.

To visit the rooms, wards and other places in the hospital where these people live and see the respect and appreciation each one has for Dr. Tarwater and hear him call each by name and show a personal interest in his problem was a lesson in hospital administration that can not be excelled anywhere in this country. The almost perfect deportment existing in Bryce Hospital under the superb management of the present staff takes the institution out of the once unwisely called "insane asylum" where all dreaded to go and places it at the head of the list of hospitals where patients receive the best in human kindness and professional attention. A few hours' visit there will send every doctor home with a better understanding and evaluation of what doctor-patient relationships should be.

At 6:30 P. M. we were invited into the dining room where a delicious meal was served, and where all enjoyed an hour of good fellowship and short speeches.

For these pleasures we are indebted to Dr. Tarwater, Superintendent of Bryce Hospital, Mrs. W. J. Rosser, President of the Woman's Auxiliary, Dr. J. H. Goode, President of the Tuscaloosa County Medical Society, Drs. Seale Harris and H. B. Searcy, Past-Presidents of our state organization, and to Dr. Gallalee, the President of the University of Alabama.

This ended the program for the day and thus ends the annual report of the Vice-President of the Northwestern Division of the Association.

Report of Vice-President Carter

Southwestern Division

It is with a sense of humility that I present the report from the Southwestern Division. Due to an unavoidable and very annoying illness for the past twelve months, I have been unable to accomplish as much as I had planned.

During the past year one scientific meeting was held in the Southwestern Division. This meeting was held in Atmore October 27, 1949. The Escambia County Medical Society acted as host for the occasion. The meeting was outstanding and a real medical feast was enjoyed by the

unusually large attendance. Seventy-five doctors registered for the scientific program.

Immediately following the scientific program, the Woman's Auxiliary entertained the doctors and their wives with a delightful supper on the beautiful and spacious lawn of Mr. and Mrs. Marshall Patterson. The druggists of Escambia County very generously supplied liquid refreshments of every description and strength.

We were honored to have with us our distinguished President, Doctor Frank Wilson, also the Vice-President of the Northwestern Division, Doctor J. G. Daves.

In my report a year ago I mentioned the meeting of an organizational type held in Marion on February 27, 1949. The purpose of this meeting was to group several counties together, thereby insuring a good attendance at the scientific meetings. Doctor Roy R. Kracke, Dean, Medical College of Alabama, assured us the college would supply the essayists providing the attendance was sufficiently large to justify their coming. The new group is known as The Black Belt Postgraduate Medical Seminar, and during the past year four scientific meetings were held. The meetings were well attended and much enthusiasm was shown by the doctors. At the February 12, 1950 meeting the following officers were elected: Doctor R. C. Hill, President, succeeding Doctor A. F. Wilkerson; and Doctor James H. Armstrong, Vice-President, succeeding Doctor R. C. Hill. Doctor C. E. Kimbrough was reelected Secretary-Treasurer.

In conclusion, I would like to thank my friends for their fine spirit of cooperation. It has been a joy to work with you. I am sorry my health is such as to force me to relinquish an office from which I have derived a very great deal of pleasure. For my successor I bespeak the same kind of support you have uniformly accorded me.

Message of the President

Members of the Medical Association of the State of Alabama and Guests:

I find it extremely difficult to find words to express to you my gratitude and appreciation for the great honor you have conferred upon me by electing me President of this Association. I could not help feeling a great sense of inadequacy in being called upon to follow in the footsteps of the great leaders in medicine who have preceded me as President of the Medical Association of the State of Alabama, but I have attempted, in my small way, to carry on the work of my predecessors.

As your President, I have traveled around the state to some extent but have not been able to attend nearly as many meetings as I should have. It has been a great pleasure to meet with the various county societies and most gratifying to see their enthusiasm. I have met with both our Senators and several Congressmen from Alabama and we are most fortunate in having these men in Congress who are against compulsory health insurance and socialized medicine. Also representing this Association your President has ad-

dressed many groups outside the medical profession in an effort to further our public relations program.

As President, I have made the following appointments this year:

Dr. Paul Jones, as delegate for two years to the American Medical Association.

Dr. D. G. Gill as his alternate, their term of office expiring December 31st, 1951.

Dr. J. O. Finney, as Vice-President of the Northeastern Division, to serve the unexpired term of Dr. Frank Jordan, resigned.

Committee appointments have appeared in the report of the Secretary.

You have heard the reports of the Vice-Presidents and Chairmen of the various Committees, which gives you some idea of the tremendous amount of work which has been done by these men and their Committee members. I want to express our thanks to them for the splendid work they have done.

I would like to thank our faithful Secretary, Dr. Douglas Cannon, for his cooperation at all times. His advice and counsel have meant much to me.

The Woman's Auxiliary has been most active in helping us carry out our public relations program. It is my hope that every doctor's wife in Alabama will become a member of this organization.

The Alabama Division of the American Cancer Society, under the dynamic leadership of Mrs. Lillian G. Meade, has contributed greatly to the promotion of cancer research and to the education of the people.

You have heard the report of the Committee on Maternal and Child Health. This Committee has made an exhaustive study of conditions throughout our state. The last official national report shows Alabama to have the highest maternal death rate of any of the forty-eight states. Something should be done to improve this deplorable condition. Certainly antenatal clinics should be set up in all our counties for the care of the indigent. Also, some attempt should be made to provide obstetrical care for the indigent in those counties which have the highest maternal death rate, mainly the counties which have the highest percentage of Negro population.

In his report for the Committee on Medical Service and Public Relations, Dr. J. Paul Jones has told you of the work of this group and its recommendations. It has been my pleasure to meet with this group in Montgomery at every meeting it has held during the past year. This group, under the able leadership of its Chairman, Dr. J. Paul Jones, has really done a magnificent job. It is probably as active as any similar organization in the United States. Mr. Dozier, as Director of Public Relations, has done outstanding work in interesting the Woman's Auxiliary, lay groups, and individual doctors in the fight against compulsory health insurance.

It seems to me that it is important that the Medical Association of the State of Alabama have a state grievance or review committee, the

function of the committee being to handle complaints of patients against doctors or doctors against hospitals. This committee could hear these complaints and try to adjust them to the satisfaction of all concerned. The formation of such a committee would be a great step forward in improving public relations. At the present time there is nothing a patient can do who feels that he has been imposed on by a doctor, either in fees or otherwise, other than take the matter to court.

Prepayment voluntary health insurance plans have made great progress in the United States during the past few years. The Blue Cross and the Blue Shield plans are now available to any individual in the state under 65 years of age and the number of such policies in force has greatly increased. It seems to me that it would be wise for the members of this Association to consider the advisability, at some future date, of accepting the fees set out in the Blue Shield schedule in full payment for services rendered to persons in certain income groups.

I recommend to the Association that something be done about our coroner system, which is certainly far from what it should be. There have been several deaths recently, from poisoning, brought to the attention of the people in Jefferson County, which had been entirely overlooked. Broader authority for the coroner in ordering autopsies should be provided. Jefferson County should at least provide a qualified medical examiner, on a part-time basis, for expert assistance to the coroner.

We are now passing through a critical period, both in the history of organized medicine and in the history of America. For some time there has been a determined effort by the President of the United States, his administration, and a small well organized minority in our country to force us gradually and insidiously into a socialistic state. This has been carried out so smoothly that many of us have not realized the direction in which we are traveling. Increasing taxes, increasing government spending and greater centralization of power in Washington will eventually lead us into socialism. The administration's all-out fight to force compulsory health insurance or socialized medicine upon us is just another step in that direction.

It seems that Mr. Truman's idea is to make our system of medicine, as much as possible, like the socialized system of medicine practiced in England, and, from what one can gather from unbiased reports, the type of medicine practiced in England today must be terrible. So far we have been able to block this plan temporarily, through the cooperation of our Association, county medical societies, individual efforts, and the work of the American Medical Association. Allied with us in this fight against socialistic tendencies in government are many lay groups and leaders in other professions and industry, without whose help we cannot succeed in our fight against socialized medicine. Last year there were at least 3000 such organizations who came

to our aid. We will need the help of these and many other such organizations in the days ahead.

I am afraid that many doctors do not realize how close we are to socialized medicine and what the passage of such a law would mean to them personally, to us as a profession, and to the health and welfare of our country. Many of the doctors in our state do not seem to know of the important work being carried on by the American Medical Association to prevent the passage of such legislation. This work is expensive and should be wholeheartedly supported by every doctor in the state of Alabama and in the United States. I would like to urge every doctor in the state, who has not done so, to send in his \$25.00 and join the American Medical Association. Twenty-five dollars is a small price to pay to help keep the practice of medicine in this country as it is today under our present system of government.

In closing I wish again to express my deep appreciation for the honor you have conferred upon me and my thanks to each and every one of you for your help and cooperation. Especially do I want to thank Dr. Thos. Boulware, General Chairman, and his various committees of the Jefferson County Medical Society for the work they have done to make this meeting a success.

Scientific Program

Dr. William H. Riser, Jr., Birmingham, read a paper entitled *Anemias Due to Gastrointestinal Tract Disorders*.

Dr. R. J. W. Hobbs discussed *Treatment of Complicated Fractures*, and Dr. John D. Sherrill, co-author of the contribution, concluded the discussion.

Miscellaneous Business

Dr. E. W. Rucker introduced a resolution relating to conflicting meetings; and Dr. J. Paul Jones, one relating to an appeals committee and to rotation of membership on the Medical Service and Public Relations Committee—both of which were referred to the State Board of Censors.

Mr. Phil Hudson, fraternal delegate from the Alabama Pharmaceutical Association, was presented.

Afternoon Session, Thursday, April 20 2:00 P. M.

Dr. A. E. Thomas, Montgomery, presented Dr. Ralph A. Reis, Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School, Chicago, who read a paper on *Prolonged Labor*.

Dr. John C. Burch, Professor of Gynecology, Vanderbilt University Medical School,

Nashville, dealt with *Hysterectomy: Indications and Technique*.

There followed a Symposium on *Congenital Heart Disease*, the field of pediatrics being represented by Dr. Wallace Clyde; cardiology by Dr. John B. Burrett; surgery by Dr. Chas. Donald; and anesthesiology by Dr. E. Bryce Robinson, all members of the faculty of the Medical College of Alabama.

Evening Session, Thursday, April 20 8:00 P. M.

Drs. E. B. Frazer and Harvey Mintz, Mobile, read a paper on *Diverticulum of the Female Urethra*.

Treatment of the Pyogenic Dermatoses was discussed by Dr. Ray O. Noojin of Birmingham.

Dr. Samuel E. Upchurch, Birmingham, presented a paper on *Treatment of Cancer of the Lip*.

The evening's program was concluded with a paper by Dr. H. H. Thomas, Birmingham, entitled *Diagnosis and Treatment of Abnormal Uterine Bleeding*.

Second Day Friday Morning, April 21 9:00 A. M.

Dr. Arthur I. Chenoweth, Birmingham, read a paper entitled *Observations on Indications and Results in Splenectomy*.

The Problems of *Gastric Carcinoma* were discussed by Dr. Gilson Colby Engel, Professor of Clinical Surgery, Graduate School of Medicine, University of Pennsylvania, Philadelphia.

The Jerome Cochran Lecture was delivered by Dr. Paul D. White, Clinical Professor of Medicine, Harvard Medical School, Boston, and Executive Director of the National Heart Institute, his subject being *Historical Delays in the Application of Knowledge About the Heart*. (The lecture will appear in a later issue of the Journal.) In introducing Dr. White to the Association, Dr. J. S. McLester said:

Dr. McLester—This Association established the Jerome Cochran lectureship more than a half century ago to do honor to the memory of a great leader in medical thought, in public health and in medical organization. Jerome Cochran was a great man. He had rare wisdom and a remarkably strong personality. Men followed him. The lecture has been delivered each year by a leader in one or another of the medical sciences. Today we are to have the pleasure of hearing one of

these leaders discuss a part of medicine of constantly increasing importance to us here in America and of peculiar interest to the man in practice—cardiology.

Leadership in the study of cardiology, like all other leadership in medicine, has moved from place to place. A little less than fifty years ago this leadership was a small Dutch University, Groenigen, where Wenkebach worked. It was Wenkebach who contributed largely to our knowledge of arrhythmias.

Then, a little later, the center of thought in cardiology moved to Great Britain to the home of a great practitioner of medicine, Sir James Mackenzie. He and his associate, Sir Thomas Lewis, contributed a great deal to the knowledge gained from the polygraph and later from the electrocardiogram. Later, Sir James moved to Scotland to Saint Andrews' University and, because of this, Saint Andrews acquired leadership in two great fields of human endeavor—in golf—they claimed the best golf links in the world—and in the study of cardiology.

Later, the center of thought and of research in cardiology moved to America, more particularly to Boston. We are fortunate today in having as the Jerome Cochran lecturer a physician who has taken leadership in the development of cardiology in America. His writings have helped wonderfully in the development of this subject and his excellent textbook, widely read, has contributed enormously to our knowledge of disease of the heart. He is a teacher, being Clinical Professor of Medicine at Harvard University, and his leadership is being exerted today in large degree as Executive Director of the National Advisory Heart Council; and most important of all, he is a private practitioner of medicine. I take great pleasure in introducing Dr. Paul Dudley White.

President Wilson awarded certificates of distinction to the following physicians of Alabama who had been practicing their profession for fifty years:

THE FIFTY YEAR CLUB
CLASS OF 1950

Acker, Chas. T.
Blake, Theodore M.
Boswell, Franklin A.
Campbell, Virgil O.
Douglass, John
Fox, Carl Alexander
Gay, Nathaniel S.
Glasgow, Robt. S.
Gresham, Walter A.
Harwood, Robert E.
Howell, Wm. Edward
Johnston, John David
Klie, Henry B.
Leach, James Edward
Lightfoot, Philip Malcolm
Meharg, Shelton T.
McLeod, John Calvin

Miles, William C.
Moorman, Marion Ridley
Mount, Bernard
Peck, Willena
Prescott, Wm. Ernest, Sr.
Rudolph, Chas. Murray
Sellers, Henry Graham
Shaw, Rowell Wilbur
Speir, Philip Van Buren
Stutts, Henry Lee
Ward, Walter Rowland
Wilkinson, John Edward, Jr.
Williams, Wm. Claiborne
Williamson, George W.
Wilson, Dilimus Wesley
Winn, Lochlin Minor
Wright, Lee Roy

Miscellaneous Business

The Secretary of the Association announced vacancies as follows in the College of Counsellors:

Vacancies that will present in the College of Counsellors at this meeting are as follows and for the reasons set forth:

1st Congressional District—2. The first terms of seven years of J. Mac Bell and J. Paul Jones have expired.

2nd Congressional District—2. The first terms of seven years of J. O. Lisenby and F. W. Riggs have expired.

3rd Congressional District—1. E. T. Brunson's second term of seven years has expired.

5th Congressional District—1. B. C. Scarbrough is deceased.

6th Congressional District—3. R. C. Partlow's first term of seven years has expired. The second terms of seven years of R. C. Hill and J. V. Howell have expired.

9th Congressional District—4. The first terms of seven years of G. A. Denison, Hughes Kennedy, J. A. Meadows and J. R. Morgan have expired.

Afternoon Session, Friday, April 21

2:00 P. M.

Dr. Frank H. Constantine, Manhattan Eye and Ear Hospital, New York City, gave a Description and Discussion of the Dacryocystorhinostomy Operation.

The Senior United States Senator from Alabama, the Hon. Lister Hill, addressed the Association, his theme being the voluntary insurance bill he is sponsoring in Congress.

Dr. Karl Kesmodel introduced Dr. Paul S. Swenson, Professor of Radiology, Jefferson Medical College, Philadelphia, who read a paper entitled The Responsibility of the Radiologist to the Patient and Referring Clinician in the Examination of the Gastrointestinal Tract.

Dr. Edgar G. Givhan, Jr., Birmingham, discussed Silicosis, and the discussion was followed by remarks by Dr. Alfred Habeeb, Birmingham.

Evening Session, Friday, April 21

8:00 P. M.

A Comparison of the Newer Mercurial Diuretics was made by Dr. Wm. J. Atkinson, Jr., Mobile.

Diseases of the Thyroid in Children—With a Case Presentation and a Motion Picture of the Operation—brought the scientific program to a close, the essayist being Dr. J. Henry Goode of Tuscaloosa.

Other Events

Dr. C. N. Carraway entertained at a bar-becue on Thursday, April 20, from 5 to 7 P. M., honoring members of the Association,

wives of visiting physicians, and members of the Woman's Auxiliary.

Dr. James S. McLester and Dr. James B. McLester were hosts to members of the Association and visiting physicians at their office, 930 South 20th Street, on Friday, April 21 at 5:00 P. M., the guest of honor be-

ing Dr. Paul D. White.

In honor of President Frank Wilson, the Jefferson County Medical Society entertained at a reception and dance on Friday, April 21, at 10 P. M., at the Birmingham Country Club in Shades Valley.

(To be concluded in the June Journal)

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

CHILDREN AND RABID FOXES

Several types of animals may be bitten by other animals with rabies. When that happens, they are almost certain to contract the disease. Of particular concern to Alabamians at the present time, however, is rabies among foxes. Not only is the number of positive fox heads abnormally high. There is every reason to think—and fear—that the prevalence of rabies among foxes is rapidly increasing.

Naturally, the positive fox brains that are examined by the State Health Department's Bureau of Laboratories are not all those in existence in the state. Indeed it is freely conceded that the diagnosed cases of fox rabies represent only a small fraction of the total. A single fox, for example, may bite a dozen other foxes before it is finally killed and found to have rabies. Probably not more than one or two, if any, of those secondary cases are ever added to the official records. And of course, before each of them dies, it may bite a dozen or more. And so a dangerous circle is formed, constantly growing larger and larger.

Nevertheless, the fluctuations of positive fox head diagnoses play an important role in the effort to keep abreast of this problem. For rises and declines in the number of such diagnoses almost certainly reflect similar changes in the number of such cases actually occurring. For example, if the number of positive fox heads examined doubles within a given period, it seems safe to assume that there has at least been a sharp increase in the total number of foxes that have developed rabies. Certainly it would be most unlikely that fewer actual cases of fox rabies

would occur at a time when positive fox head diagnoses were on the increase. So the laboratory reports do throw a revealing and valuable light upon the prevalence of fox rabies in the state or anywhere else.

And what do the laboratory reports tell us about positive fox heads? It is indeed a revealing story. And it is a pretty disturbing one too.

One hundred and twenty-five positive fox heads were examined by Alabama public health laboratories in 1949. That was nearly four times as many as were examined in 1944. It was more than four times as many as were examined in 1946. It was considerably more than twice as many as were examined in 1947. And it represented an increase of nearly half a hundred over the 1948 total. Obviously, the number of positive fox heads being examined in Alabama is very much on the increase. On the strength of reports already received, there is good reason to think the 1950 total will be at least 200. That would represent an increase of 75 over the 1949 total. And remember what was emphasized a few moments ago: The positive diagnoses represent only a relatively small fraction of the cases of fox rabies in existence. And remember this too: An undiagnosed case is just as dangerous to humans as any case on the official laboratory records.

There is still another disturbing aspect of the fox rabies picture: The rapid increase in cases is running counter to the rabies trend generally. After increasing steadily between 1944 and 1946, the number of positive heads of other animals began dropping rapidly. The 1949 total was only about a third of that for 1946.

The significance of a rising incidence of fox rabies at a time when rabies in other

animals is on the way down should be evident to anyone. It means simply that we need to do something effective about fox rabies. Otherwise we may expect a sharply increased widening of that already-mentioned circle of contact and infection. We may expect heavier and heavier financial losses to farmers, pet-owners and others from the necessary destruction of valuable and prized animals. There is almost certain to be much fear among a large element of our population. Hunters and other sportsmen may find themselves attacked by viciously mad foxes. Some may not be able to escape biting. Then they will face a grave and troublesome choice: They will have to decide whether they will go to the trouble and expense of taking Pasteur treatment or risking the near-certainty of contracting one of the most horrible and fatal diseases known.

But there is another danger in this sharply rising incidence of rabies among wild foxes. Dr. H. P. Sawyer, Director of the State Health Department's Bureau of Laboratories, thinks it is probably the most serious of all. He declared in a recent statement:

"The significance of this does not apply so much to domestic and farm animals. They can be protected by immunization. The figures show that this is being accomplished. The peril of the situation is that to our rural children. They cannot be immunized—only treated if infected. The number bitten by rabid foxes is perceptibly growing. While the rabies vaccine treatment, made by our Health Department and always available, appears to be effective (we had no case of human rabies in 1949), we are certain to have too many cases if the incidence in foxes continues its upward trend. It is all too certain that many children playing about on small farms and in woodlands will be bitten by rabid foxes without the means of capturing the animals for examination. Some parents will not appreciate the wisdom of giving the treatment. Some children will not tell their parents that they have been bitten until too late. Moreover, rabies can be transmitted by mere contact through a scratch or break in the skin. Thus a child may contract rabies by innocently petting a rabid animal that has the 'dumb' type of infection and that seems to be merely hurt."

The consequences of ignorance or carelessness, or both, may be loaded with tragedy, the laboratory director pointed out. His warning continued:

"You could not wish your worst enemy or a hardened criminal to die by rabies, let alone your own child. Those who have ever seen a rabid human being may well be haunted through the remainder of life by its remembrance, so horrible a death is it. And death is the inevitable outcome in human rabies, for there is no cure for it once it is contracted. Reference has been made to the vaccine treatment, but it must be remembered that it is only useful in preventing the development of the disease in a person already infected. It is usually given in fourteen daily hypodermic doses as a preventive. But the protection it gives is so short-lived as to make it useless for a general immunization program."

You may be sure an encounter with a wild fox suffering from rabies is anything but a pleasant experience. It is certainly something that most of us would rather read or hear about than go through.

One of the many people who have had first-hand experience with rabid foxes was a certain youngster. Information presently at hand does not indicate whether he lives east or west of the Alabama-Georgia border. But it is almost certain that the incident occurred in a relatively small two-state area about ten miles long and not more than ten miles wide. The youngster's name, obviously, will not be divulged.

He was one of several children playing checkers on the porch of a building. Almost directly overhead a bright light was burning. This youngster happened to drop a rubber band, and it fell, or seemed to fall, off onto the ground. He didn't want to lose it. So he left his young friends and jumped off into the darkness. As soon as he did so, he received a bad fright. A mad fox made a rush at him and locked its teeth in the cuff of the child's overalls. (He had rolled them up so as to keep them out of the way while he rode his bicycle.) The startled and frightened child, hardly realizing what had happened, started fighting the fox with his fists. In the struggle, one of his fingers struck the fox's teeth. The animal escaped. Because of that injury to his finger, it was considered advisable to take Pasteur treatment.

An Alabama child of sixteen went to a pasture one afternoon to drive in some cows. On the way he encountered a fox. Before he realized what was happening, the animal made a rush toward him. Fortunately, the youngster had his .22 rifle with him, and he fired it at the fox but missed. He managed

to keep it at a distance by kicking and fighting it off with his rifle barrel. After struggling in this way, he managed to get the rifle reloaded. This time he took more careful aim. The fox was killed.

Another encounter with a supposedly rabid fox involved a man on horseback. When the horse approached the fox, the latter resolutely stood his ground, instead of getting out of the way of the horse's hoofs. Then, when the horse and its rider approached closer, the fox made a vicious attack on the mare's legs. The frightened animal began rearing, pawing and kicking. Then she bolted and ran. The fox took up the chase, reversing the usual order. After a while the fox gave up and fell behind.

From what has been said, you may get the impression that all rabid foxes are vicious and aggressive. That, however, is not true. Sometimes they act sluggish and seem to be having difficulty in getting about, with no apparent inclination to start trouble with others, animals or humans. Sometimes, too, the deadly germs produce the most mournful and pitiful cries you can imagine coming from a supposedly dumb beast.

Hugh G. Forester was a special deputy with the Georgia Wildlife Commission some years ago and probably still is. The experiences that have been described in this article were among some 82 that he reported. One of the most dramatic encounters of this kind involved him personally.

Mr. Forester started across a mountain without a gun. Soon after starting out he heard "loud squalling noises" not far away. From his experience with foxes he readily recognized them as the wails of a rabid fox. Regretting his failure to bring along a gun, he picked up a stout hickory club.

"About 100 yards further up," he wrote in his report, "I came in sight of the fox. It was staggering and blundering about, sort of in circles. I stopped and watched it for two or three minutes. It fell over and started wallowing on the ground. I dashed up, thinking I could close in and kill it with my club while it was down, but while I was still about twenty feet away it got up and seemed to see me."

Mr. Forester's description of that late-afternoon encounter continued:

"It started toward me, but I remembered what Dr. Griffin (presumably a friend of his) said about rabid dogs not charging if you stood still, so I don't think I moved an eyelash. I do think I remember pushing my hat down a time or two, as my hair was raising it up so high. Well, the fox stopped and stared at me from about twelve feet away. He looked very sick, as after about thirty seconds he did not seem to pay any more attention to me but dropped his head downward and slowly closed his eyes. I took particular notice of his mouth, and there was some slobber, and most of the time the mouth was partly open. After doddering on his feet about a minute, he sort of woke up and let out that unearthly weird squall that is hard to describe and turned and went up the mountain side. I started out again behind him, and he did not get more than 50 yards until he fell over on his side and started wallowing, and again I tried to close in to club him, but again he got up and came toward me. I acted as before and he never did attack me, but came quite close, with a sort of inquiring, bewildered manner. About every minute he would let out a wild, weird shriek. We continued on in this manner for about three-quarters of a mile, or nearly to the top of the mountain. The fox's equilibrium was badly disturbed, as I watched him many times try to walk a fallen log, and he would only get a few feet before he would topple over on his side and wallow around before he could get up."

This kept up for some time. A dozen times or more the mad fox made a weak gesture of attack but could do little more than gesture. At last they reached the top of the mountain. There their paths parted, one going in one direction, the other in another. But for some time afterward while he scaled a cliff Mr. Forester "could hear the fox squalling below."

Unfortunately, many other people's encounters with rabid foxes end much less happily than Mr. Forester's. And a tragic percentage of those who are bitten by these crazed animals are children.

Parents, like other good citizens, thus have a double responsibility. First, they should lend their efforts to the broad campaign to reduce the prevalence of rabid foxes, as well as other rabid animals. In the second place, they should do everything they can to protect their community's children and children generally against them.

A mycotic infection should be suspected in every patient who has chronic draining sinuses even though the clinical appearance of the lesions may be identical with those produced by the tubercle bacillus and by certain anaerobic streptococci.—*David T. Smith, M. D., J. A. M. A., December 24, 1949.*

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

MARCH 1950

Examinations for diphtheria bacilli and Vincent's	241
Agglutination tests (typhoid, Brill's and undulant fever)	1,144
Typhoid cultures (blood, feces and urine)	503
Examinations for malaria	274
Examinations for intestinal parasites	4,451
Serologic tests for syphilis (blood and spinal fluid)	27,604
Darkfield examinations	9
Examinations for gonococci	2,275
Examinations for tubercle bacilli	3,280
Examinations for meningococci	0
Examinations for Negri bodies (microscopic)	92
Water examinations	1,522
Milk and dairy products examinations	4,594
Miscellaneous	1,692
Total	47,681

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1950

	Feb.	Mar.	E. E.* Mar.
Typhoid	7	3	4
Undulant fever	3	5	5
Meningitis	9	10	16
Scarlet fever	60	49	88
Whooping cough	96	96	115
Diphtheria	23	21	23
Tetanus	5	2	2
Tuberculosis	189	204	255
Tularemia	2	7	2
Amebic dysentery	6	1	1
Malaria	5	3	49
Influenza	1463	2764	939
Smallpox	0	0	0
Measles	203	233	828
Poliomyelitis	8	3	2
Encephalitis	0	1	0
Chickenpox	283	327	251
Typhus	3	8	11
Mumps	164	171	259
Cancer	310	349	197
Pellagra	3	0	3
Pneumonia	403	393	435
Syphilis	618	910	1307
Chancroid	9	13	13
Gonorrhea	335	342	519
Rabies—Human cases	0	0	0
Positive animal heads	33	37	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

The study of tuberculosis cannot be separated fruitfully from that of other pulmonary diseases. The teaching of the disease should be organized in conjunction with that in other pulmonary diseases from the standpoint of physical findings, clinical course, differential diagnosis, and management.—Robert G. Bloch, M. D., *Bull. Nat. Tuberc. A.*, January 1950.

BUREAU OF SANITATION

Arthur N. Beck, M. S. in S. E., Director

OCCURRENCE AND SIGNIFICANCE OF NITRATES IN PUBLIC WATER SUPPLIES WITHIN ALABAMA

Contributed by

J. L. Crockett, Jr., B. S., M. S.
Sr. San. and Pub. Health Eng.

During the past five years the relationship between nitrates in drinking water and methemoglobinemia in infants up to six months of age has been covered in several articles. It has been suggested¹ that methemoglobinemia develops as a result of the amount of nitrates ingested in relation to body weight. Invariably the cases described in the literature have been associated with the use of water high in nitrates to prepare milk feeding formulas. The cases reported by Faucett and Miller¹ indicated a nitrate content of well water used in preparing milk formulas as varying from 70 to 300 p.p.m.* while Ferrant² reports the occurrence of methemoglobinemia in infants less than two months of age who had been fed on powdered milk diluted with well water containing from 180 to 619 p.p.m. of nitrates or had received bismuth subnitrate for enteritis or for x-ray purposes. Frederick J. Chapin³ reports marked methemoglobinemia appearing in an infant four weeks of age about 20 hours after ingestion of a formula made with boiled well water containing 243.5 p.p.m. nitrates, 200 p.p.m. chlorides, and 339 p.p.m. bicarbonate as CaCO_3 . It is significant that all cases have been associated with the use of well waters. According to H. H. Comly⁴ and F. Holman Waring⁵ it appears that the amount of nitrate nitrogen that may be

*P.p.m. is an abbreviation for parts per million, a term used in the waterworks field which denotes the quantity of a material present in a million parts of water.

1. Faucett, R. L., and Miller, H. C.: Methemoglobinemia Occurring in Infants Fed Milk Diluted with Well Water of High Nitrate Content, *J. Pediat.* 29: 593 (1946).

2. Ferrant, Maurice: Methemoglobinemia, *J. Pediat.* 29: 585 (1946).

3. Chapin, Frederick J.: Methemoglobinemia from Nitrates in Well Water, *J. Michigan Med. Soc.* 46: 938 (1947).

4. Comly, H. H.: Cyanosis in Infants Caused by Nitrates in Well Water, *J. A. M. A.* 129: 112 (1945).

5. Waring, F. Holman: Significance of Nitrates in Water Supplies, *J. Am. Water Works A.* 41: 147 (1949).

deemed as a minimum in the causing of methemoglobinemia is in the vicinity of 20 p.p.m.

In view of the foregoing it is felt that a report on the occurrence of nitrate nitrogen in waters used as public supplies in Alabama would be of interest. During the past three months, one of the Alabama State Department of Health's chemists has been detailed to perform chemical analyses of water samples. Only public water supplies have been examined as these affect large groups of people and are under direct supervision of the State Department of Health. To date, chemical analyses have been made on samples of water collected from 106 supplies. One of the determinations included in these analyses was nitrate nitrogen as nitrogen. In addition to the above supplies, information on the presence of nitrate nitrogen is available on 47 other supplies making a total of 153 supplies on which this chemical determination has been made. There are, incidentally, 264 public water supplies in the state actually engaged in the production of water for public usage.

So far, 28 supplies show the presence of nitrate nitrogen in excess of 1 p.p.m. Of this number, only 5 supplies were found to contain more than 5 p.p.m., with the maximum being 11 p.p.m. Other states, Iowa, Illinois, Minnesota and Ohio have also found that high nitrate nitrogen did not occur in municipal or public water supplies. It should be recognized that all public water supplies have not been checked. The supplies on which records of nitrate nitrogen are available represent 58 per cent of the total number in the state and are considered as representative of the sources of public water supply.

Unfortunately studies of private water supplies in Alabama have not been made in a sufficient number to be of use in reaching a conclusion as to the significance of the nitrate nitrogen content of these waters. According to Waring,⁵ studies in Illinois, Iowa and Minnesota seem to show that dug wells are responsible for the largest portion of waters with high nitrate nitrogen content. It is conceivable that a similar situation would exist in Alabama, particularly with dug wells located and constructed without respect to protection against possible contamination. It would appear, therefore, that

wells, properly located and constructed from a sanitary aspect, would be one of the answers to prevention of methemoglobinemia in infants. On the basis of this line of thought, an investigation of the source of water supply would be advisable should cases of methemoglobinemia occur in which there is an indication that water high in nitrate nitrogen is the causative agent.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL SUMMARY OF VITAL STATISTICS FOR 1949

Alabama's health picture from the vital statistics point of view was excellent. Recorded deaths numbered 26,350, giving a general rate of 8.5 per 1,000 population, a slight decrease from the rate of 8.6 in 1948. For the third consecutive year more than 80,000 live births were registered. The annual rate of 26.8 births per 1,000 population was the fourth highest on record. The two favorable factors of low death rate and high birth rate have continued to produce a rapid natural increase in population.

Diseases of pregnancy and childbirth caused 158 deaths last year. This represents a maternal death rate (18.5 per 10,000 total births) nearly 15 per cent below that for 1948 (21.8), and is the lowest on record for this cause. A great saving of lives has been made during the past several years among babies under one month old as witnessed by a drop in neonatal mortality from 36.7 deaths per 1,000 live births in 1940 to 26.9 in 1949. The infant death rate of 39.4 per 1,000 live births in 1949 is the highest since 1945, but is well below the five-year average of 40.2.

Interpretations and comparisons of provisional data require certain precautions for valid conclusions. This is particularly true of the 1949 provisional vital statistics concerning detailed causes of death. The 1949 revision of the International Statistical Classification of Diseases, Injuries and Causes of Death has produced some mortality statistics which are incomparable in various degrees with those compiled in prior years under the old coding procedure. This lack of comparability is due to some change in definitions and inclusions as well as a change in rules for assigning the primary cause of death. Prior to 1949 the selection

of a primary cause of death depended upon prescribed rules which gave varying weights and priorities to different diseases. The present (late 1948 revision) procedure gives the attending physician freedom to determine the cause of death for statistical tabulations. This system of coding presents a challenge to each physician to eliminate frequent criticism that mortality statistics do not represent the medical opinion of attending physicians. The validity of mortality statistics now depends upon the care used by physicians in stating the cause of death on certificates.

The revised code includes leukemias and aleukemias in the general class of malignant neoplasms. Nephritis no longer includes certain diseases associated with vascular lesions, diseases of the heart and circulatory system. Food poisoning has been established as a separate item and is no longer included in the accident group. Diabetes, prematurity, cerebral hemorrhage and rheumatic fever mortality statistics have been affected by revised definitions and inclusions of the new code. Detailed mortality statistics have been adjusted to conform to the revised code wherever possible. (See footnote to accompanying table.) Diseases of heart, diabetes mellitus and vascular lesions could not be adjusted for comparative purposes. Many of the inclusions of these causes formerly went into nephritis.

The mortality situation in 1949 shows little change in the rank of chief causes. Heart diseases caused nearly 30 per cent of all deaths recorded, and show by far the highest mortality rate on record. Also increasing in order of importance is cerebral hemorrhage (intracranial lesions of vascular origin) and cancer (malignant neoplasms). Cancer mortality in 1949 was the highest on record in Alabama. While the numerical increases and crude rates of mortalities caused by the so-called "degenerative diseases" deserve the greatest possible benefits of medical research, there is nothing to indicate an actual increase in mortality rates calculated for specific age groups. Accidental deaths in 1949 numbered 1,670 with a record low rate of 53.8 per 100,000 population. There were fewer deaths from pneumonia and influenza. The tuberculosis death rate has decreased nearly two-thirds from that of twenty years ago to reach a

VITAL STATISTICS TRENDS

Births, Stillbirths and Causes of Death	Number Registered			Rate*		
	Prov. 1949	Final 1948	Avg. 1944- 1948	Prov. 1949	Final 1948	Avg. 1944- 1948
Total live births.....	83222	84994	79106	26.8	27.7	26.3
Total stillbirths.....	2303	2328	1824	26.9	26.7	28.0
Deaths, stillbirths excluded.....	26350	26349	25662	8.5	8.6	8.5
Infants deaths: under one year.....	3282	3189	2505	39.4	37.5	40.2
under one month.....	2237	2209	2101	26.9	26.0	26.6
Cause of Death						
Tuberculosis, 001-019.....	907	1011	1130	29.2	33.0	37.6
Syphilis, 020-029.....	205	294	346	6.6	9.6	11.5
Typhoid and para- typhoid, 040, 041.....	1	6	11	†	0.2	0.4
Dysentery, 045-048.....	35	27	44	1.1	0.9	1.5
Scarlet fever, 050.....		3	2		0.1	0.1
Diphtheria, 055.....	21	37	44	0.7	1.2	1.5
Whooping cough, 056.....	23	61	78	0.7	2.0	2.6
Meningococcal infec- tions, 057.....	17	29	46	0.5	0.9	1.5
Poliomyelitis, 080, 081.....	14	18	16	0.4	0.6	0.5
Encephalitis, 082, 083.....	1	5	12	†	0.2	0.4
Measles, 085.....	53	14	36	1.7	0.5	1.2
Typhus fever, 100-108.....	3	14	28	0.1	0.5	0.9
Malaria, 110-117.....	18	15	28	0.6	0.5	0.9
Malignant neoplasms, 140-205.....	2791	2725	2435	90.0	88.8	81.1
Diabetes mellitus, 260**.....	306	413	361	9.9	13.5	12.0
Pellagra, 281.....	47	70	90	1.5	2.3	3.0
Vascular lesions of central nervous system, 330-334**.....	2913	2687	2499	93.9	87.6	83.2
Other diseases of nervous system, 300-318, 340-398.....	428	312	358	13.8	10.2	11.9
Rheumatic fever, 400-402.....	52	30	30	1.7	1.0	1.0
Diseases of the heart, 410-443**.....	7703	6446	5611	248.4	210.1	186.9
Diseases of the arte- ries, 450-456.....	346	247	270	11.2	8.0	9.0
Other diseases of the circulatory system 444-447, 460-468.....	356	93	92	11.5	3.0	3.1
Influenza, 480-483.....	211	246	401	6.8	8.0	13.4
Pneumonia, 490-493.....	952	1190	1242	30.7	38.8	41.4
Bronchitis, 500-502.....	46	68	75	1.5	2.2	2.5
Appendicitis, 550-553.....	93	84	132	3.0	2.7	4.4
Intestinal obstruction and hernia, 560, 561, 570.....	197	151	181	6.4	4.9	6.0
Gastro-enteritis and colitis (under 2) 571.0, 764.....	228	144	183	7.4	4.7	6.1
Cirrhosis of liver, 581.....	150	151	132	4.8	4.9	4.4
Diseases of pregnancy and childbirth, 640-689.....	158	190	228	18.5	21.8	28.0
Sepsis of pregnancy and childbirth, 640, 641, 645.1, 651, 681, 682, 684.....	39	44	62	4.6	5.0	7.6
Congenital malforma- tions, 750, 759.....	334	329	301	4.0	3.9	3.8
Accidental deaths, total, 800-962.....	1670	1912	1883	53.8	62.3	62.7
Motor vehicle acci- dents, 810-835, 960.....	686	722	665	22.1	23.5	22.2
All other defined causes.....	4725	5770	5760	152.3	188.1	191.9
Ill-defined and un- known causes, 780, 793, 795.....	1345	1557	1577	43.4	50.8	52.5

*Birth and death rates per 1,000 estimated population; stillbirths per 1,000 total births (stillbirths included); infant deaths per 1,000 live births; specific causes per 100,000 population; deaths from puerperal causes per 10,000 total births.

**Statistics affected by changes in coding procedure and are not strictly comparable to those prior to 1949.

†Less than one-half of 1 per cent.

record low of 29.2 per 1,000 population in 1949. Poliomyelitis was prominent in the news last year due to an unusually large number of reported cases. It is gratifying to observe both numerical and rate decreases in mortality caused by this disease. The mortality experience with measles was the worse in several years, although not alarming. There was a great increase in the number of reported cases of measles, an unpredictable disease that fluctuates widely from year to year in prevalence and mortality.

Other significant statistics listed in the

printed table are syphilis mortalities which are rapidly assuming a position of minor importance; diphtheria caused 21 deaths with a substantially lower rate of 0.7; meningococcal infections caused 17 deaths, the smallest number in fifteen years; typhus fever deaths numbered only 3; typhoid fever and encephalitis caused 1 death each. Last year is the first in our history during which no scarlet fever deaths were reported.

Indeed the statistics do show that 1949 was a year of improved public health in Alabama.

BOOK ABSTRACTS AND REVIEWS

Normal Values in Clinical Medicine. By F. William Sunderman, M. D., Ph. D., Professor of Experimental Medicine and Clinical Pathology, University of Texas Postgraduate School of Medicine; and Frederick Boerner, V. M. D., Late Associate Professor of Clinical Bacteriology, Graduate School of Medicine, University of Pennsylvania. Cloth. Price, \$14.00. Pp. 845, with 237 figures and 413 tables. Philadelphia and London: W. B. Saunders Company, 1949.

This book is presented purely as a reference book and the idea for its publication was conceived from the thought that it is essential to know the "norm" before recognizing the abnormal. Anatomy reference books and texts on physiology are usual sources of reference for information as to normal values in the human. Many such normal values, however, have never been gathered together and tabulated prior to this edition. Diligent search through many volumes and through much current literature was usually required before a busy doctor could have before him the exact "norm," whether that be the length of the femur or the normal value for blood chemistry studies. Normal values are ordinarily established by the assembling and assimilation of data attained by the study of many supposedly normal individuals. It is almost impossible for a single individual to assume normal values from his own experience.

The authors have assembled in this volume all the available known "norms" of the human individual and have, for the first time, made these values available in the single volume for quick reference. It is difficult to evaluate such a volume in comparison with the usual types of work in therapy and diagnosis, but this reviewer feels that this book is an almost essential addition to the library of any physician who desires to make his study of the "abnormal" more exact. It is the most complete source for obtaining normal values thus far seen.

J. M. Barnes, M. D.

Handbook of Medical Management. By Milton Chatton, A. B., M. D., Instructor in Medicine, University of California Medical School, San Francisco; Sheldon Margen, A. B., M. D., Clinical Instructor in Medicine and Research Associate in Medicine, University of California Medical School, San Francisco; and Henry D. Brainerd, A. B., M. D., Assistant Clinical Professor of Medicine and Pediatrics, University of California Medical School; Assistant Clinical Professor of Pediatrics, Stanford University School of Medicine; Physician in Charge, Isolation Division, San Francisco Hospital. New first edition. Cloth. Price, \$3.00. Pp. 476. Palo Alto, California: University Medical Publishers, 1949.

This little volume is the first edition of a handbook designed to give students and practitioners a handy reference for immediate treatment of almost any illness. Once a diagnosis has been established, the mind almost automatically turns to problems of treatment in an effort to bring the most effective measures into action at the earliest possible date.

This handbook is pocket-sized, well indexed and covers a wide range of diseases. It has numerous illustrative tables of normal and abnormal findings, diagnostic criteria, and ends the consideration of each disease with a specific therapeutic program. Its wide range of coverage and low price should appeal to many physicians.

J. M. Barnes, M. D.

Current Therapy 1950. Latest Approved Methods of Treatment for the Practicing Physician. Editor: Howard F. Conn, M. D. Consulting Editors: M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, Robert H. Williams.

Cloth. Price, \$10.00. Pp. 736. Philadelphia and London: W. B. Saunders Company, 1950.

With this volume the publisher presents the second annual edition of its new concept to the problem of therapy for the busy doctor. This is not just a "review of literature" but a compact description of authoritative modes of treatment compiled by an editorial board of more than 250 contributors. In many instances two or more methods of treatment are included and the source of each method is indicated but no preference for any method is expressed. This approach will afford the physician several methods of attack on his stubborn cases.

The task of editing and publishing such a large volume and keeping it current is a tremendous one and this reviewer feels that the publisher has made a real contribution with this work. In preparing this second edition all treatments in-

cluded in the 1949 edition were revised, edited, and brought up to date. This does not mean that experimental methods of treatment are used, but rather that sound, authoritative, therapeutic procedures which are in current use are presented for reference. In addition to re-edition of previous material, sixteen new subjects are included, with a new section on Diseases of the Locomotor System. The section on Infectious Diseases has been re-edited to include all the newest advances in chemotherapy. New additions of interest are: aureomycin and chloromycetin in urinary tract infection, vitamin B-12 in pernicious anemia, and Dramamine in motion sickness.

This reviewer feels that this volume is a valuable addition to the medical literature and should prove an excellent reference volume on current therapy for the busy practitioner.

J. M. Barnes, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

FEDERAL INCOME TAX LAWS UNFAIR TO PROFESSIONS, SAYS ECONOMIST

Present federal income tax laws discriminate against physicians and other professional men and women, Frank G. Dickinson, Ph. D., Chicago, economist and statistician of the American Medical Association, points out.

Because a considerable portion of physicians' lifetime earnings are "bunched" into a relatively few peak earning years, they pay more income taxes than other persons who receive the same lifetime incomes spread more evenly over a greater number of years, Dr. Dickinson says in an article in the April 29 Journal of the A. M. A.

This discrimination in lesser degree applies to a number of other professions, according to the article.

"A physician undergoes a long training period (the longest among the professions) during which he foregoes income and incurs expenses accumulating to approximately \$35,000 at the time of entering medical practice, at approximately age 28," Dr. Dickinson says. "The working lifetime remaining after this prolonged training period is shortened.

"To pay off this investment in training in annual installments, his annual gross earnings would have to be at least \$5,000 more than those of a person whose earning period started at age 18.

"Under the 1942 Federal Internal Revenue Code, funds used by companies for the purpose of providing employees with pensions or shares in profit-sharing trusts are deductible from gross receipts as business expenses and thus are not a taxable part of the employer's or company's income, if the particular plan is approved by the Bureau of Internal Revenue.

"Since the provisions are restricted to employees, professional men who can qualify as employees—for example, company lawyers and company physicians—can receive the benefits of these pensions and profit-sharing trusts, while those who conduct their professions as single proprietorships or partnerships may not qualify for these benefits.

"The Board of Trustees of the American Medical Association authorized its representatives to record, at a meeting of the Association of the Bar of the City of New York, its support, in principle, of the proposal that the Internal Revenue Code be amended to permit physicians who practice as individual proprietors or partners to declare as business expenses the costs of pension programs for themselves, with the proviso that there should be a reasonable maximum pension.

"The American Medical Association believes that such an amendment would appreciably reduce the present discrimination."

WARNS OF DANGER IN INDUSTRY FROM BERYLLIUM

Recent reports from doctors and other research workers emphasize danger of poisoning in industry from beryllium, Dr. C. M. Peterson, Chicago, secretary of the American Medical Association's Council on Industrial Medicine, said today.

Dr. Peterson cited articles in the April issue of Archives of Industrial Hygiene and Occupational Medicine, published by the A. M. A.

Exposure to beryllium, a metallic element, produces both a severe, acute lung disease which resembles pneumonia and a chronic form of lung disease with a fatality rate of from 10 to 35 per cent, Dr. Peterson said.

A report in this issue of the Archives by Dr. James K. Scott and Herbert E. Stokinger, Ph. D., Robert H. Hall, Ph. D., L. T. Steadman, Ph. D., Norman J. Ashenburg, M. S., and George F. Sprague III, M. S., of Rochester, N. Y., concerning tests on animals reveals the high toxicity of beryllium.

"Not only is beryllium unquestionably a toxic agent but it is toxic in such small quantities as to be among the most toxic chemically of all elements yet investigated," this research group points out, adding:

"These amounts give rise to acute effects. It is reasonable to believe that still smaller quantities produce the chronic disease in human beings and that 'safe' levels of beryllium exposure ultimately may be set well below one microgram per cubic meter of air."

FIND NEW ANTIBIOTIC DRUG EFFECTIVE AGAINST BACTERIAL AND VIRUS DISEASES

Medical research reports on a new antibiotic drug, terramycin, indicate that it is effective against whooping cough, several kinds of pneumonia, syphilis, gonorrhea and other diseases.

Early clinical trial of the drug is described in two articles in the May 6 Journal of the American Medical Association by two Washington, D. C., research groups.

Terramycin is produced by a newly-discovered mold, *Streptomyces rimosus*, which was isolated from a soil sample. It belongs to the same family that produces streptomycin.

Drs. Ernest Q. King, Charles N. Lewis, Eugene A. Clark, Jr., John B. Johnson, John B. Lyons, Roland B. Scott and Paul B. Cornely and Henry Welch, Ph. D., of the Federal Food and Drug Administration and Freedmen's Hospital, administered terramycin to 30 patients having various types of infections.

Their results indicate that the drug is effective against pneumococcic and streptococcic pneumonias, urinary tract infections and whooping cough. Whooping stopped within 24 hours in one patient and within three days in another patient after treatment with terramycin was begun.

Terramycin was used in the treatment of venereal diseases at the Polk Health Center and the Rapid Treatment Center of Gallinger Municipal Hospital, District of Columbia Health Department, Drs. F. D. Hendricks, A. B. Greaves, S. Olansky, S. R. Taggart, C. N. Lewis, G. S. Landman and G. R. MacDonald and Henry Welch, Ph. D., of the Federal Food and Drug Administration and the District of Columbia Health Department, report.

Eighty-one patients were treated, including 73 with gonorrhea, six with syphilis and two with granuloma inguinale.

Terramycin effects a satisfactory cure rate in gonorrhea, although the dose required is somewhat higher than has been found necessary with chloromycetin, according to this group. Clinical healing of lesions of both syphilis and granuloma inguinale occurred promptly with daily doses of terramycin.

Laboratory work shows that terramycin appears comparable to aureomycin in its activity against certain bacteria and viruses, they say.

Both groups report that although the drug generally was well tolerated, nausea, vomiting, faintness and dizziness were experienced by some patients.

FIND CHLOROMYCETIN EFFECTIVE AGAINST TULAREMIA

Successful treatment of six cases of tularemia, also known as rabbit fever, with chloromycetin, one of the newer antibiotic drugs, is reported by a group of doctors from the University of Maryland School of Medicine, Baltimore.

The disease is acquired from wild rabbits and other wild animals and insects.

SYNTHESIS OF ACTIVE PORTION OF ACTH SEEN AS POSSIBLE

Recent research should make possible the eventual synthesis of an "active fragment" of ACTH which produces relief from symptoms of rheumatoid arthritis, according to an editorial in a recent issue of the Journal of the American Medical Association.

Synthesis of ACTH in the laboratory has been considered to be of insurmountable difficulty, owing to the weight of the molecule and the fact that it is protein in nature.

The editorial refers to the work of Choh Hao Li of the Institute of Experimental Biology, University of California, Berkeley, and Norman G. Brink, Melvin A. P. Meisinger and Karl Folkers of the Research Laboratories of Merck & Co., Inc., Rahway, N. J.

Dr. Li obtained fragments of the hormone which retained biologic activity. The three Rahway research chemists recently reported a component or components of ACTH derived from the hormone compound by a laboratory process (peptic digestion), according to the editorial. This substance kept rheumatoid arthritis in remission in two patients previously treated with ACTH and was "clinically active" in a third patient.

"The effect was equivalent to the intact ACTH," the editorial says, adding:

"With the activity of ACTH being confined to a relatively small molecular weight compound, it should be possible eventually to synthesize this active fragment in the laboratory. This, in turn, would free the amount of the drug which could be produced from the number of pituitary glands available."

In further processing of the fragmentary product, the Rahway chemists found it to contain at least seven common amino acids, compounds which serve as building blocks for the body.

"The revelation that the active fragment is composed of a chain of approximately seven amino acids makes commercially feasible synthesis from other than glandular sources a possibility," Dr. Paul L. Wermer, Chicago, assistant to the secretary of the A. M. A.'s Council on Pharmacy and Chemistry, said.

"Although this synthesis may prove extremely difficult, the discovery of this product constitutes an important basic step toward assuring a more adequate supply of

material having ACTH activity," he added.

The natural supply of ACTH from pituitary glands of hogs definitely is limited by the source and, as the situation now stands, could never approach the demand.

Armour & Co. estimated that some 70,000,000 hogs will be processed commercially between November 1, 1949 and November 1, 1950. If every pituitary could be saved, which is impossible, and if one milligram of ACTH, which is high, could be extracted from each gland, there would be obtained a theoretical amount which would give only one dose each per year to less than half the persons with arthritis in the nation.

At present, the supply of ACTH still is inadequate to meet all the research requirements of groups desiring to study the hormone.

NEW EYE INSTRUMENT MAY HELP PRE- VENT BLINDNESS

A new instrument which measures pressure within the eye may result in the prevention of much unnecessary blindness. Development of the instrument, called a tonometer, is reported in the April 29 Journal of the American Medical Association by a New York doctor and a research worker.

Dr. Conrad Berens and Charles P. Tolman, B. S., also of New York, point out that the instrument is for "screening" large numbers of persons rather than for diagnosing specific diseases.

Another influencing factor is the recognition that even in areas of prevalence, only persons discharging or likely to discharge the causative organism are sources of new infections. Furthermore, it is becoming increasingly accepted that with some exceptions infection is likely to occur only in the early years of life, although there may be clinical manifestations for many years because of the long incubation or latent period.

In these days, when so much emphasis is being placed on the organization of research and the necessity of large funds to carry it on, it is significant to recall that the advances in control of leprosy have been made by careful clinical observation and epidemiologic facts judiciously appraised without special organization or special financial support.*

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TEN-YEAR REVIEW OF INTUSSUSCEPTION AT THE JEFFERSON-HILLMAN HOSPITAL BIRMINGHAM, ALABAMA

GRAY C. BUCK, M. D.

and

S. JOSEPH CAMPBELL, M. D.
Birmingham, Alabama

Thirty-one cases of intussusception, proven either by surgery or autopsy, have been admitted to the Jefferson-Hillman Hospital in Birmingham, Alabama, during the past ten years (1940-1949).

Of this number, 45 per cent were white and 55 per cent Negro. Forty-five per cent were below six months of age, and 74 per cent below one year of age; the sex incidence was 13 males to 18 females. The intussusception in these cases originated at the terminal ileum or at the ileocecal valve, and all cases were treated surgically. In only two cases was spontaneous reduction found at surgery, and in only 8 cases was resection of the bowel necessary. There was no recurrence of an intussusception postoperatively in any of these cases. Fourteen thousand, five hundred seventy-six (14,576) patients twelve years old or younger were admitted to pediatrics during this 10-year period, so the incidence of intussusception in children at this institution is .21 per cent.

In this series of 31 cases, there were five deaths and, excluding the 78-year old white female whose diagnosis was made at autopsy, the mortality rate is 13 per cent. There was a delay of hospitalization in these cases of two to five days. During this 10-year period, there were three more cases of

suspected intussusception which were reduced by enemas and were not operated on.

It is interesting to note that of these 31 cases there were only 3 which had a definite etiology. One was produced by an inverting Meckel's diverticulum, one a lipomatous polyp, and the third by a carcinoma of the cecum. In the remainder, 90 per cent, no definite cause could be found and these must fall in that group called idiopathic. An immature imbalance of the autonomic nervous system, or the engorgement of the rich network of lymphatics around the terminal ileum at the time the infant begins to take solid food, has been offered as an explanation for this unknown group. Although the vast majority of intussusceptions lie in the unknown group, there are other definite causes, such as ectopic pancreas, sarcoma, leiomyomata, and so forth.

The signs and symptoms of these cases varied little and, as a whole, were fairly typical. All seemed to have abdominal pain, and 78 per cent had some form of blood passed per rectum. Vomiting was present in 90 per cent, and an abdominal mass was palpated in 78 per cent. A most misleading physical finding is the soft abdomen, which was present in the majority of these cases. Barium enemas aided the diagnosis considerably, whereas other laboratory findings varied greatly and were of no value.

From the Medical College of Alabama, Birmingham.

The treatment of these cases was immediate surgical exploration, and none were purposely reduced by pressure enemas. Of these 31 cases, only 8 required resection of the bowel; three of these were irreducible. Reduction, when possible, was carried out by milking with the whole hand the head of the intussusceptum backward, and by applying gentle traction to the proximal end of the intussuscepiens. In 7 cases, after reduction, the terminal ileum was sutured to the ascending colon by one or more sutures. This, supposedly, is to prevent a recurrence of the intussusception.

When resection is necessary, a primary end-to-end open type of anastomosis is preferred; although other types, such as side-to-side and end-to-side are just as satisfactory. As one knows, the lumens to the proximal and distal bowel segments can be made equal by sharply angling the narrower one and sacrificing part of its antimesenteric border, or by incising the antimesenteric border. The reader should be impressed with the fact that the terminal ileum can be anastomosed to the cecum and ascending colon as safely as to the transverse colon. Also, when necessary, after a short circuiting procedure, or after resecting the right colon, an anastomosis can be done satisfactorily between the ileum and the colon, in an end-to-end fashion.

An open type of anastomosis was done on most of these cases, by using a 2-0 continuous interlocking and Connell suture of intestinal chromic catgut as the inner suture line, and interrupted sutures of 4-0 black silk as the outer.

It is interesting to remember that tears or wounds of short segments of small bowel can be repaired at surgery by actually producing an intussusception and suturing it in place. This has also been suggested as treatment and used by some surgeons in irreducible intussusceptions of the small bowel. Dr. A. H. Montgomery and Dr. J. J. Mussil have reported interesting experimental work on this problem. When intussusception is used therapeutically, the distal segment should be used as the intussuscepiens. This is a retrograde intussusception and, though rare, such has been reported in

the literature as having occurred spontaneously.

Dr. J. Payton Barnes of Houston, Texas, has an ingenious method of dealing with irreducible intussusceptions which he reported in *Surgery, Gynecology and Obstetrics* in December 1947. His method is to suture the intussusceptum to the intussuscepiens and, after marsupializing the cecum to the peritoneum, he closes the wound, opens the cecum, and amputates the telescoped bowel. In this way the resection is done extraperitoneally, and contamination of the peritoneal cavity is avoided.

A Mikulicz procedure was used on the 36-year old colored female but this procedure is not recommended. It should be especially avoided in infants and children since the loss of fluids and electrolytes from an ileostomy is considerable, and the maintenance of electrolytes and the balance of fluids is the greatest single factor in the pre- and postoperative care of these patients.

Fecal contamination is always feared and should be guarded against in these unprepared emergency resections. In infants, this danger of contamination is not quite as great, since the bacterial flora does not seem to be as abundant or as potent as in the adult. Very often, too much time is consumed in trying to reduce the intussusception in irreducible cases before making the decision to resect. In fact, in one of the following cases the cecum was ruptured, causing more contamination than if the operator had done a resection sooner.

Postoperatively, when bowel has been resected, a tube is placed in the stomach. This is connected to suction only if distention occurs. A rectal tube is also used when deemed necessary. The pediatric department at the Jefferson-Hillman Hospital follows these cases very closely and orders fluids (governed chiefly by clinical observations) as necessary. Of course, when resection of the bowel is done, the antibiotics are extremely valuable. Sulfadiazine, penicillin, dihydrostreptomycin, bacitracin, aureomycin and chloromycetin have been used, and are being used.

Two of the most interesting cases are reported as follows:

REPORT OF CASES

Case No. 1.

E. F., a previously healthy, well-developed 4 month old colored female infant, was admitted to the Jefferson-Hillman Hospital on 4/29/49 with a history of a sudden onset of vomiting on 4/26/49 which was followed shortly by the passage of bright-red blood per rectum.

Physical examination revealed an acutely ill infant, being very lethargic and dehydrated. The temperature was 101.6°. The abdomen was distended and there was a sausage-shaped mass in the lower left quadrant of the abdomen. The abdomen was not rigid, but a mass was palpated by rectal examination and blood was found on the examining finger.

A Lindeman needle was immediately placed in an ankle vein; fluids were started, and surgery was scheduled. On admission, the blood count was:

Rbc 3,740,000; hemoglobin 73%; color index 1.0; wbc 21,150, with 14 lymphocytes, 7 monocytes, 72 segmented cells, 3 eosinophiles, 0 basophils, 4 stabs, 0 juveniles and 0 myelocytes with a comment of marked anisocytosis.

After the infant was satisfactorily hydrated, 1/600 gr. of atropine as its only premedication was given. The patient was taken to surgery, and under general anesthesia of drop ether, a long right rectus incision was made. On opening the peritoneal cavity, there was a moderate amount of clear yellowish fluid. Exploration of the abdomen revealed an intussusception which had arisen at the ileocecal valve and had progressed around to the rectum. By a gentle milking procedure on the head of the intussusception, it was reduced around into the ascending colon. At this point, further reduction was impossible. The ileum was almost transected as it entered the cecum, and the appendix was also nearly severed. It was obvious that the bowel inside the cecum was gangrenous and the distal foot of the ileum still remaining outside the cecum was showing gangrenous change due to the obstruction to its blood supply. The whole ascending colon was cyanotic and showed gangrenous change too. More forceful measures were taken in an attempt to reduce the gangrenous bowel so that the ascending co-

lon could at least be spared. During the procedure, the cecum ruptured. Using packs to prevent as much contamination as possible, the gangrenous small bowel was resected, as well as the cecum, ascending colon, and first part of transverse colon. The open ends of the colon and ileum were closed and a side-to-side isoperistaltic anastomosis was done in an open fashion in the manner already described in this paper.

Preoperatively and postoperatively, glucose, saline, and Ringer's lactate solutions were given. During surgery and postoperatively, the patient received blood. A stomach tube with suction was used and, besides sulfadiazine being given intravenously, penicillin and dihydrostreptomycin were given intramuscularly. Paraldehyde (3 cc. in mineral oil) was used per rectum for sedation. Ascorbic acid was given in the infusion, and oxygen was administered by nasal catheter. (It is felt that the critically ill patients get better care if not isolated from the nurse and doctor by an oxygen tent.) Care must be taken to prevent plugging of these catheters with mucus.

The infant was desperately ill for 3 days, but on the 4th postoperative day began to take glucose water by mouth, and on the 6th postoperative day a weak formula was given. The patient did amazingly well thereafter, having only a superficial infection of the ankle from the "cut down," which healed when opened and treated with hot saline compresses.

Case No. 2.

V. C. K., a previously healthy 3-month old white female, was admitted to the Jefferson-Hillman Hospital on 7/19/48 with a history 28 hours old. The infant began to cry out about every 20 minutes, with abdominal pain, and was very fretful. It soon refused to nurse and began to vomit. The patient was taken to a doctor who did a rectal examination and discovered bright red blood. Hospitalization was advised.

Physical examination revealed a lethargic, poorly responsive child who appeared acutely ill. The temperature was 101.8°. There was a large ovoid mass found in the right side of the abdomen, and bright red blood was found by rectal examination.

The infant was hydrated with plasma, blood and glucose, and then scheduled for surgery. Under a general anesthesia of drop ether a mid right rectus incision was made, and the abdomen opened. There was no free fluid in the peritoneal cavity. The terminal ileum had telescoped into the cecum and around into the transverse colon. Attempts at reduction were unsuccessful and a right hemicolectomy was performed by resecting the terminal ileum, cecum (with attached appendix), and the ascending colon. The ends of the bowel were inverted and a side-to-side isoperistaltic anastomosis was done in an open manner.

Postoperatively, the patient was sedated with $\frac{1}{8}$ gr. of sodium phenobarbital, received fluid and plasma intravenously, and penicillin intramuscularly. A stomach tube with Wangenstein suction was discontinued on the 2nd day, and the patient had an uneventful postoperative course thereafter.

The mortality rate at the Jefferson-Hillman Hospital over this 10-year period is 13 per cent, and of the cases operated on within 24 hours of the onset of symptoms it is 0 per cent. Eccles in 1898 reported a 45 per cent mortality in children operated upon within 24 hours of onset, and 60 per cent when done on the second day. Gibson reported in 1900 a mortality rate of 37 per cent on the first day and 39 per cent on the second day.

This drop in the mortality rate has been due somewhat to the improvement of operating equipment and technique, but is chiefly due to the antibiotics, the advance in infant anesthesia, the improved parenteral fluids, and the constant vigilance of the physician.

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Small Bowel Obstruction—The clinical indications of small bowel obstruction are definite and characteristic. They are unlike any other form of abdominal colic and present none of the manifestations of localized disease in either of the four quadrants of the abdomen.

The symptoms and physical signs may be divided into three characteristic manifestations and they may well be called the tripod of small bowel obstruction.

They are pain, visible peristalsis and borborygmus. Although they are recognized clinical entities, they are worthy of emphasis, because it is only by repetition that fundamental principles of disease become a part of our clinical knowledge. Through this process not only do fundamentals become a part of us but reconsideration and discussion open up new fields for thought, speculation and ultimately add to the sum total of our store of knowledge.

Pain in bowel obstruction is peculiar unto itself. It is in no way related to any other type of abdominal pain. It is not confined to any quadrant of the abdomen. It is, therefore, not a localized inflammatory process or localized colic. It is quite the contrary; it is generalized, diffuse and not associated with tenderness or muscle spasm. It is not continuous but is spasmodic in character. It starts with intestinal cramps, diffuse in character, increasing in intensity . . . Only in strangulated obstruction and adhesive bands attached to the anterior parietal peritoneum will there be localized tenderness or muscle spasm.—*Hunt, South. M. J.*, June, '50.

MANAGEMENT OF THE PATIENT WITH THYROID DISEASE

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In no field of medicine has there been more change during the past decade than in the management of thyroid disease. Moreover, the profusion of writings and the variety of opinions expressed have been confusing and have served only to make treatment of these patients more difficult for many of us. For this reason an attempt has been made to review the subject and to present the most generally accepted current methods of management of thyroid disease.

So far as is known, the thyroid is a gland of internal secretion whose principal and almost sole function is secretion and storage of its own hormone, thyroxin. Structurally, this gland is composed of numerous follicles lined by epithelium and surrounded by a rich network of capillaries and lymphatics. The thyroxin is stored in the colloid to be supplied to the body on demand. The height of the cells is determined by the amount of colloid. When there is little colloid, the cells are columnar, and when the acini are distended, the cells are cuboidal or flat.

The iodine-containing hormone, thyroxin, stimulates the metabolic processes of the body. Its mode of action is not understood but it is known that tissue oxidation is decreased when thyroxin is deficient and increased when thyroxin is excessive. Since iodine is the essential ingredient of thyroxin, the function of the thyroid is largely dependent upon a constant minimal supply of iodine to maintain its output of the hormone, and in the absence of a minimal supply of iodine pathologic changes, consisting of hypertrophy and hyperplasia, occur within the gland. The colloid is exhausted and the low cuboidal cells lining the follicles become columnar and increase in size and number. The iodine content of the gland is diminished and, as the output of the hormone is reduced, the demand of the body, through stimulation by the pituitary, is increased and there is further hyperplasia of the gland. Thus is established a vicious cycle of iodine deficiency.

CLASSIFICATION

Thyroid disease has been classified physiologically¹ into diseases due to 1) hypofunction, 2) hyperfunction and 3) no disturbance in function. The diseases produced by each of these are:

- I. Hypofunction:
 - a. Myxedema,
 - b. Cretinism.
- II. Hyperfunction:
 - a. Toxic diffuse goiter,
 - b. Toxic nodular goiter.
- III. No disturbance in function:
 - a. Nontoxic diffuse goiter,
 - b. Nontoxic nodular goiter,
 - c. Thyroiditis,
 - d. Benign tumors,
 - e. Malignant tumors.

DISEASES DUE TO HYPOFUNCTION

Diseases due to hypofunction are produced usually by primary atrophy, which may be due to infection, surgical excision or some unknown cause. Scar tissue usually replaces the normal structure of the gland. At times myxedema occurs in conjunction with other endocrine disturbances which affect inadequate stimulation of the thyroid. Microscopically, the myxedemic gland shows distention of the acini with low cuboidal or flat epithelium. In these cases treatment with desiccated thyroid will usually return the basal metabolic rate to normal.

DISEASES DUE TO HYPERFUNCTION

Toxic diffuse goiter, or hyperplastic goiter, includes Graves' disease. It is characterized by increased basal metabolic rate, greatly elevated pulse rate, increased pulse pressure, loss of weight, loss of physical strength, extreme nervousness, irritability, emotional instability, tremor, flushing of the skin, thyroid enlargement and exophthalmos. Of all the symptoms of hyperthyroidism, those referable to the circulatory system are the most constant. Persistent, force-

1. DeCourcy, J. L., and DeCourcy, C. B.: *Pathology and Surgery of Thyroid Disease*, Springfield, Ill., Charles C. Thomas, 1949.

ful, afebrile tachycardia with increased pulse pressure must be considered the result of hyperthyroidism until proved otherwise. An increased precordial thrust and palpitation are almost always present. There is diminution of the gastric acidity and generally hypermotility of the gastrointestinal tract with the resultant digestive disturbances. The basal metabolic rate may not always be high but it will never be below 0. Elevation of the basal metabolic rate does not necessarily imply hyperthyroidism since a high metabolic rate may be produced by various nervous states, leukemia, or malignant hypertension. Bartels² has been performing metabolism tests under pentothal anesthesia in an attempt to find a true basal. In his series the basal metabolic rate of normal patients dropped an average of 13 points when given an average of 1 gm. of pentothal, whereas patients with hyperthyroidism showed no drop and required an average of 2 gm. of pentothal. The basal metabolic rate of patients with greatly elevated rates due to various nervous states dropped to normal under the influence of pentothal. The blood cholesterol is low or in the lower levels of the normal range. Blood iodine levels³ are too inconsistent to be of any value and, although the levels of protein-bound iodine correlate well with the clinical signs and symptoms, the test is too difficult and expensive for routine use. There is a negative calcium balance and there may be degeneration of the long bones.

The symptoms of toxic nodular goiter are much the same as those of toxic diffuse goiter except that they are not usually as dramatic. There is not the extreme emotional instability peculiar to toxic diffuse goiter, and exophthalmos is seldom present. Toxic diffuse goiter is smooth and symmetrical whereas toxic nodular goiter, as its name implies, is irregular and nodular. Microscopically, toxic diffuse goiter shows hyperplasia whereas in toxic nodular goiter there is little or no hyperplasia. In toxic diffuse goiter there are papillary projections into the acini, decrease of colloid, high col-

umnar epithelium and often an increase of lymphoid tissue between the follicles. In toxic nodular goiter there may be evidence of long standing degenerative changes, such as thick bands of scar tissue, colloid degeneration, hemorrhage and calcification.

TREATMENT

Drugs—Since its introduction by Plummer,⁴ iodine^{1, 5, 6} has made surgical treatment of hyperthyroidism relatively safe and, until the advent of the antithyroid drugs,^{1, 7} administration of iodine, followed by subtotal thyroidectomy, was the treatment of choice in this disease. Now, however, with the use of propylthiouracil a much safer type of treatment and much better therapeutic results can be expected. Obviously, any drug which is as safe as a surgical operation and can accomplish the same results without the discomfort, scar, morbidity, loss of time from work and additional cost associated with an operation, is a better therapeutic measure than surgery. Some of our most eminent authorities³ now believe that propylthiouracil fulfills these qualifications. Only slightly toxic, it, in many cases, breaks the vicious circle of thyroid stimulation and produces lasting remission after its withdrawal.

Propylthiouracil should always be tried¹ in: 1) patients with Graves' disease with mild hyperthyroidism associated with small diffuse goiters, 2) recurrent hyperthyroidism with its incident high morbidity, and 3) poor risk patients or those having a short life expectancy regardless of the type of toxic goiter.

The effects of propylthiouracil³ are of short duration and for that reason the 200 to 300 mg. daily dosage should be divided into four doses daily and this should be maintained until the basal metabolic rate is subnormal. Hypothyroidism caused by treatment is better controlled by small doses of thyroid than by reducing the dosage of propylthiouracil.³ If the basal metabolic rate cannot be reduced to normal the use of

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the more potent methylthiouracil or even thiouracil,^{7, 8} which is ten times as toxic as propylthiouracil, should be considered. The incidence of remissions after withdrawal of the drug is apparently directly proportional to the duration and adequacy of treatment. It is now believed³ that a remission will be maintained in more than 50 per cent of patients adequately treated for a year or more.

No patient with toxic goiter should be operated on until sufficient preparation has been made to bring the basal metabolic rate to normal. Preoperative treatment consists in 1) complete mental and physical rest, 2) mild sedation, preferably with bromides, 3) Lugol's solution, 10 to 15 drops three times daily, 4) propylthiouracil, 50 to 75 mg. four times daily, 5) vitamin B complex in large doses orally or intramuscularly, 6) calcium lactate, 10 gr. three times daily, 7) ascorbic acid, 1 gm. daily, and 8) a high carbohydrate, high protein diet of at least 5000 calories daily. Propylthiouracil is a goitrogenic drug causing hyperplasia which increases the vascularity of the gland and therefore greatly increases the technical difficulty of thyroidectomy. For this reason, all patients in whom thyroidectomy is contemplated should have iodine in therapeutic doses for two weeks or more before the operation.

In nodular goiter the situation is different.^{3, 9} Tumors are present in the thyroid; they are of cosmetic importance; they tend to produce pressure symptoms; and they are potentially dangerous from the standpoint of malignancy. The risk of operation after proper preparation is slight, and recurrences are rare. Thyroidectomy, therefore, remains the treatment of choice for nodular goiter with or without hyperthyroidism.

Operative Technic—The surgical technic of thyroidectomy has evolved from the multiple clamp method to what is known as anatomic thyroidectomy. The latter method is considered by many^{3, 10} to be much safer

because it exposes and protects the recurrent laryngeal nerves. King¹¹ has shown that 25 per cent of all recurrent nerves divide into anterior and posterior branches within the thyroid space. In such cases in particular it is extremely easy to injure one of these nerves if the old multiple clamp technic is employed. In general, the anterior branch supplies the adductor muscles and the posterior branch the abductor muscles of the vocal cords.

The accepted procedure is to divide the prethyroid muscles, unless the gland is small, free the gland, identify and ligate the superior thyroid vessels, and then divide them, freeing the superior pole. The recurrent nerves in the area of the inferior thyroid artery are then identified and the inferior thyroid artery and lateral thyroid vein are ligated and divided. The gland is then excised over three or four clamps leaving approximately one fifth of its substance on its posterior surface. It is dissected from the trachea and the procedure repeated on the other side. With the use of nonabsorbable ligatures the wound can be closed without drainage.

Roentgenotherapy is of little or no value in the treatment of toxic nodular goiter. However, it may produce a partial remission in as many as 50 per cent³ of patients with toxic diffuse goiter. It should be given with a 200 K. V. machine and at least 2000 r. must be delivered in order to produce satisfactory results.

Radioactive Iodine—Hamilton and Soley^{3, 12} showed that the iodine content of the blood is one part in ten million whereas that of the thyroid is one part in one thousand. The thyroid thus concentrates iodine ten thousand times. If the iodine is radioactive, the thyroid will receive ten thousand times more irradiation than any other tissue of the body and since the thyroid stores iodine longer than eight days there is little danger of damage to other organs. Hamilton and Soley also demonstrated that the thyroid gland in patients with hyperthyroidism retains a greater proportion of radioactive

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iodine. The thyroid can be destroyed selectively without damage to other organs. The accumulated iodine is deposited selectively in the most hyperplastic regions of the thyroid.

If sufficient radioactive iodine is given, there is little doubt that hyperthyroidism can be controlled completely in all cases.³ There is little reason to expect significant damage to the kidneys, bone marrow or other organs. However, the thyroid epithelium is destroyed by the intense irradiation.

The radioactive iodine now being generally used is the isotope I^{131} which has a half life of eight days. The irradiation of I^{131} is almost all beta irradiation of short penetration and there is little experimental or clinical evidence that these rays are carcinogenic except in excessive dosage or when given over a long period of time.¹² The average initial dose in patients with mild or moderate hyperthyroidism is three to four millicuries and for severe hyperthyroidism it is four to six.³ The idea is to give an initial dose small enough not to produce hypothyroidism, and the dose is varied in proportion to the degree of toxicity and the estimated size of the gland. Four millicuries are considered safe for the average patient. If the initial dose does not effect a remission, the patient is given another dose the size of which is determined by his reaction to the first dose. It is now believed better not to try to effect complete remission with one dose.

DISEASES WITH NO DISTURBANCE OF FUNCTION

Nontoxic Diffuse and Nodular Goiters—Although nontoxic diffuse goiter and nontoxic nodular goiter are usually classified as glands showing no disturbance of function, it is generally believed that they are all potentially toxic.^{1, 3}

Nontoxic diffuse goiter is the goiter of adolescence. It is characterized by symmetrical enlargement of the thyroid with no clinical manifestations. Microscopically, the acini are greatly distended with colloid and the cells of the epithelium are low cuboidal. This type of goiter is caused by insufficient iodine and can be prevented by adequate administration of iodine in the diet in childhood. The administration of iodine after its

formation may cause it to become nodular but the administration of 0.5 gr. of desiccated thyroid daily accomplishes the same therapeutic effect without nodulation.

It is believed that all nodular goiters are nontoxic diffuse goiters which have undergone regression and fibrosis and that, therefore, all nodular goiters can be prevented by adequate iodine intake during childhood and adolescence. Malignant tumors of the thyroid are seven times as common in endemic regions as in nongoitrous areas.^{1, 13} Approximately 11 per cent of nontoxic nodular goiters and 24 per cent of nontoxic solitary nodules are malignant.^{3, 13}

Thyroiditis — There are three clinical types of thyroiditis:³ 1) subacute thyroiditis, 2) struma lymphomatosa or Hashimoto's thyroiditis, and 3) Riedel's struma or ligneous thyroiditis.

Subacute thyroiditis is a self-limited disease whose cause is not known. It runs a course varying from three weeks to six months, and subsides without treatment and usually without permanent damage to the gland. It is characterized by pain and tenderness in the thyroid, pain on swallowing and pain radiating to the ear. The gland is usually abnormally firm and tender. Microscopically, it shows the picture of a subacute inflammatory process involving the entire gland. Subacute thyroiditis usually responds rapidly to roentgen-ray therapy³ and 600 to 800 r. is ordinarily sufficient to bring about complete resolution in two to four weeks.

Hashimoto's disease¹⁴ is a progressive, chronic, lymphoid thyroiditis in which there is excessive acidophilic degeneration of the epithelial elements of the thyroid and replacement with lymphoid and fibrous tissue. The etiology is unknown. Its onset, usually in patients in the late forties, is insidious. As a rule, there is no pain in the early stages and most of the patients complain only of goiter. The entire gland is usually involved but not the surrounding structures. The diagnosis can be made by the use of a Silverman liver biopsy needle. In most cases

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the diagnosis is made at or following operation but it is believed that roentgen ray will usually effect a cure in those patients in whom the diagnosis can be established pre-operatively.

Riedel's struma is a chronic, proliferating, fibrosing process involving usually one lobe of the thyroid and the adjacent fascia, muscles, vessels, nerves and trachea. It produces a hard, woody tumor which cannot be easily distinguished from inoperable carcinoma. The etiology is unknown. The onset is insidious and there is little or no pain, tenderness or systemic reaction. The patient usually complains of goiter and pressure symptoms. The attachment to the surrounding tissues is so great that it is usually impossible to remove the tumor completely. Crile³ observed that in more than half of his cases there was a degenerating adenoma in the central core of the mass and he believes that splitting the gland and removing the central core will bring about striking improvement. Roentgenotherapy has not proved of any value in this condition.

Benign Tumors—There are two benign tumors of the thyroid: the fetal adenoma^{1, 3} and the nonencapsulating sclerosing tumor.^{1, 15} The former, which develops from a single nodule is merely attached to the thyroid gland. It grows slowly and therefore is usually not noticed until adult life. Since it has a tendency to become malignant, it should be surgically removed.

The nonencapsulated sclerosing tumor of the thyroid is easily confused with papillary carcinoma.^{16, 17} It is a small, white nodule less than 2 cm. in diameter appearing grossly as a firm scar. It is always found incidentally, usually associated with hyperplastic goiter, and never metastasizes. Microscopically, it presents the appearance of a partly sclerosed papillary tumor with local invasion. It should not be subjected to radical operation or irradiation.

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Malignant Tumors—Almost all malignant tumors of the thyroid are of epithelial origin. These are classified as 1) papillary carcinoma, 2) nonpapillary carcinoma, 3) undifferentiated carcinoma, and 4) squamous cell carcinoma. In addition, lymphosarcoma and spindle cell sarcoma are found in the thyroid. The papillary carcinomas are roughly divided into the metastasizing and nonmetastasizing groups.^{1, 18, 19}

The metastasizing papillary carcinomas grow slowly, have a low degree of malignancy and rarely metastasize distantly. They frequently metastasize to the lateral cervical nodes before they become grossly evident in the gland. These metastatic areas have been referred to as aberrant thyroids but if the thyroid is serially sectioned, the primary site can always be found. These growths should be surgically removed with their areas of lymphatic drainage. The prognosis is usually fairly good.

The nonmetastasizing papillary carcinomas tend to invade the veins and metastasize distantly to the lungs and bones through the blood stream. Lymphatic metastasis occurs late and therefore radical resection is usually futile. These cases should, however, whenever possible, have the benefit of a radical neck dissection including removal of the jugular and thyroid veins, the regional lymphatics and the affected lobe of the thyroid.^{1, 10} The prognosis is poor.

In undifferentiated carcinoma, squamous cell carcinoma, lymphosarcoma and spindle cell sarcoma there is little or no chance of a cure.

Most carcinomas of the thyroid do not take up radioactive iodine. Occasionally, however, carcinoma of the thyroid produces hyperthyroidism and will take up iodine in both the primary site and its metastatic areas. These cases do respond to radioactive iodine and should be treated with this substance whenever hyperplasia is suspected.³

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SURGERY FOR DUODENAL ULCER

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I remember reading an issue of the *Surgical Clinics of North America* in 1933 in which Dr. Lahey defined the indications for surgery in the treatment of duodenal ulcer as:

Perforation,
Repeated hemorrhage,
Obstruction, and
Intractability.

I have recently read a 1949 issue of the same publication from the same Clinic in which these same indications are defined. During this sixteen year period the type of surgical treatment recommended has undergone striking changes.

In 1933 surgeons were content to perform gastrojejunostomy or gastroduodenostomy on the majority of patients undergoing surgery for duodenal ulcer. I had the privilege at this time of hearing Dr. Berg of New York champion partial gastrectomy as the operation of choice in duodenal ulcer to a very skeptical audience of Boston surgeons. The following year at the Mayo Clinic I found that conservative operations for duodenal ulcer outnumbered partial gastrectomy by a sizeable margin; and we apprentices were busily trying to learn in which type of case a pyloroplasty was indicated, in which a gastrojejunostomy was preferable and which patients should be subjected to partial gastrectomy.

In the next five years this trend had been reversed, and it had become generally agreed that if surgery is required for chronic duodenal ulcer, the operation of choice is partial gastrectomy. This comfortable feeling of having a pat answer to the problem did not last long. Dr. Dragstedt reintroduced the operation of vagotomy and received enthusiastic support from surgeons in this country and abroad. For success this procedure depends on the elimination of the neurogenic phase of stomach acid secretion. It has been suggested that it accomplishes the result which might be expected from successful psychiatric treatment.

Proponents of this operation claim excellent results and low mortality with elimi-

nation of radical surgery. However, in many excellent clinics, Massachusetts General Hospital, the Mayo Clinic, and the Lahey Clinic, the results have been less satisfactory, the mortality comparable, and the complications more frequent and severe following vagotomy than following partial gastrectomy.

The most frequent and persistent complication has been gastric retention with foul eructation and diarrhea. There have also been reported cases of recurrent ulcers, which have perforated or bled without the warning symptoms of pain. The elimination of pain is thus not an unmitigated blessing.

There is no argument over the fact that vagotomy is a valuable procedure in patients who have had an adequate gastric resection and nevertheless have developed marginal ulceration. After all, no other surgical procedure is available. Even so, we still do not know what the long term physiologic effects from this procedure will be. So, I am inclined to follow Hamlet and "bear those ills we have" (with partial gastrectomy) "than fly to others that we know not of." With this operation, done only after failure of adequate medical treatment, we can expect 90 per cent satisfactory results, a mortality of less than 2 per cent, and in the event of marginal ulceration we have vagotomy to fall back on.

Surgery is, of course, not undertaken until the patient is in physiologic balance with regard to protein, iron, fluids and electrolytes, and, in the cases of obstruction, the stomach has been kept empty by constant suction for at least forty-eight hours. I favor a transverse incision as giving maximum exposure with minimum retraction. Freeing the stomach is begun by ligating the vessels along the greater curvature. Where it can be done without too much difficulty, the ulcer-bearing portion of the duodenum is included in the resection. There are many cases, however, especially in posterior wall penetrating ulcers where this requires very tedious dissection with the hazard of damag-

ing the common duct, or of getting beyond the ulcer only to find that there is inadequate and friable duodenal wall for satisfactory closure. It is not important to remove the ulcer itself as it will heal after diversion of the current of food. The important thing to do is to remove all the antral mucosa and to insure perfect closure of the stump. For these reasons, I have increasingly tended to resect the stomach proximal to the ulcer. Even when the resection is done because of repeated hemorrhage, management of the duodenal stump as suggested by McNealy gives a good guarantee against hemorrhage in the healing period. However, in these cases, it is probably worth while to make a greater effort to remove the ulcer than in any other conditions for which resection is done.

Many cases are encountered in which, because of inflammatory reaction surrounding the ulcer, resection has to be carried out proximal to the pyloric sphincter. It is in these that the Massachusetts General Hospital Group has advocated an exclusion operation as the first stage, followed in six or eight weeks by pylorotomy. I do not believe I could get my patients to return for the second stage operation. Most of them have exhausted their resources for the first one, and if the antral mucosa is left 50 per cent of them will develop marginal ulceration.

In such cases, I have utilized a very simple maneuver with completely satisfactory results. The stomach is transected at a convenient level as close to the pylorus as possible (Figure 1) and the mucosa is grasped with Babcock forceps and dissected free to well beyond the pyloric sphincter. This is easily done and removes the focus of hormonal secretion which is largely responsible for the development of marginal ulceration. Closing this flaring tube is not as easy to do with avoidance of "dog ears" as is the case when transection has been carried out distal to the sphincter. I have found it helpful in such cases to excise a wedge of the wall on the superior and inferior margins before beginning the first row of sutures, no clamps are used and the closure is accomplished by interrupted mattress sutures

of catgut, reinforced by a similar row of silk or cotton sutures. (Fig. 2)

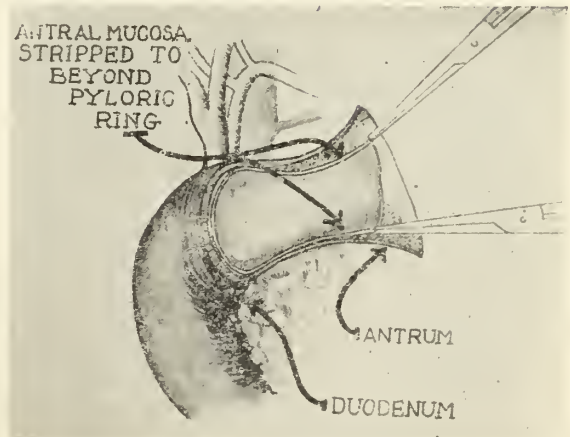


Figure 1

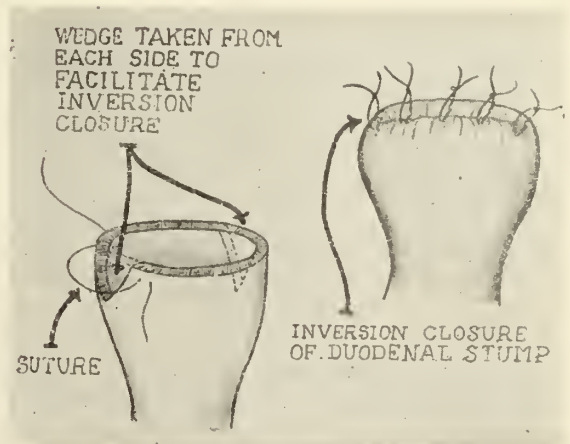


Figure 2

Having accomplished this fundamentally important step, the left gastric artery is ligated; the vessels along the greater curvature are serially ligated to effect removal of 75 per cent of the stomach, and an anterior Polya type of anastomosis is done.

I favor the anterior anastomosis for several reasons. For one thing it is easier. Second, it works just as well as the posterior. Third, there is no rent in the mesocolon, which, despite suture of its edges to the stomach wall, is a potential source of internal herniation, and, fourth and most important, if a penetrating marginal ulcer occurs, as it will in two to ten per cent of cases, it will not result in that most distressing of all complications—gastrojejuno-colic fistula.

So far as my preference for the Polya as opposed to the Hofmeister anastomosis is

concerned, I use it because I am accustomed to it, and it has served me well. I have not been impressed with any frequent complaint of the "dumping" syndrome, nor do I see why, on theoretical grounds, this syndrome should be more apt to occur with this type anastomosis than with the Hofmeister, because, regardless of the length of opened jejunum which is sutured to the end of the stomach, the effective anastomotic opening (the true stoma) can only be the size of the diameter of the jejunum.

PEDIATRIC CASE REPORTS

Edited by
AMOS C. GIPSON, M. D.
Gadsden, Alabama

Case presented by
Carl F. Dietz, M. D.

This white male infant, 13 months of age, had been seen several times since birth because of the passage of large, bloody stools. These had occurred at irregular intervals alternating with periods during which the stools had been normal. On one occasion the infant had developed an anemia sufficient to require a transfusion. The infant's colon had been investigated by barium enema and by sigmoidoscopic examination and the stools had been repeatedly examined for ova and parasites, all with negative results. On the day of admission the child had had severe and prolonged bloody stools. The parents had noted that he was rapidly becoming pale and lifeless. When first seen he was in shock, pale, having air hunger, and passing at frequent intervals large stools consisting almost entirely of bright red blood. The hemoglobin was less than 3 gms. and the erythrocytes less than 2 million. A cut down was done on an ankle vein and transfusion of citrated blood started. As soon as the blood volume had been partially restored an exploratory laparotomy was done by Dr. J. W. Ford. Our preoperative diagnosis was Meckel's diverticulum with ulceration and hemorrhage.

About three feet proximal to the ileocecal valve a Meckel's diverticulum was located and excised. The transfusion was continued during the operation and another transfusion was given the day following sur-

gery. The infant made a completely uneventful recovery and has remained free from bleeding since the operation.

Grossly, the specimen consisted of a Meckel's diverticulum partially filled with a hard, polypoid tumor mass. Sections through this area showed a partial lining of gastric mucosa with a superficial ulceration.

DISCUSSION

Many pathologic conditions have their origin in the remnants of the omphalomesenteric or vitelline duct. One of these is the diverticulum which bears the name of Johann Friedrich Meckel who, in 1808, carefully described the anatomy and embryology of this duct. Many complications arise in or about this diverticulum, which probably is present in from 2 to 3 per cent of the population. Among these complications are mechanical obstruction, volvulus, invagination, acute diverticulitis, chronic diverticulitis with and without perforation and peritonitis or abscess, acute ulceration with or without hemorrhage or perforation, chronic ulceration, tumor formation, rupture, foreign body perforation and intussusception.

Statistics show that pathologic changes occur in about 25 to 30 per cent of the group in which the diverticulum is present. Certain complications are most likely to occur in infants and young children. Among these are intussusception, peptogenic ulcer of Meckel's diverticulum, and intestinal obstruction—and these are all surgical emergencies with a potentially high mortality.

Peptogenic ulceration is being recognized as probably the most frequent complication associated with Meckel's diverticulum. The tendency of these ulcers to bleed and perforate produces the signs and symptoms that point to their presence. Intestinal bleeding is the most important sign in all the pathologic conditions associated with this diverticulum, and in these ulcer cases may well be the only sign. The blood may be tarry or bright red or salmon colored. It may occur in various amounts with short or long intervals of freedom. It may occur suddenly in amounts to produce rapid death or in small amounts over a long period of time producing a picture of secondary anemia.

Pain, tenderness and rigidity are usually absent.

The presence of blood in the stool of an infant or young child should always suggest to the physician the possibility of a Meckel's diverticulum with peptogenic ulceration. If other cause for the bleeding cannot be definitely found, exploratory laparotomy is always justified as there is no other means by which this condition can be positively excluded.

Peptic Ulcer—Antacids are almost unanimously endorsed as essential therapy. Complete neutralization of gastric acid-pepsin secretion may be possible but hardly practical other than for hospitalization periods. It is not considered essential to satisfactory ulcer management. However, reduction in acid-pepsin gastric content is conducive to control of ulcer manifestations in all instances, and especially when hypersecretion and hyperacidity are prominent.

Seniority and common usage keep ever prominent the soluble antacids—sodium bicarbonate, magnesium oxide, and magnesium carbonate. Less frequently used alkalis, such as calcium carbonate, sodium and potassium citrates, tri-basic calcium and magnesium phosphates, and the bismuth salts, are often used in various patented alkaline powders. A combination of calcium carbonate with small amounts of magnesium oxide and one of the bismuth salts is the most efficient combination with the least deleterious effect. Bismuth subcarbonate is applicable in the presence of diarrhea. While both efficient, pleasant, and inexpensive, it must be remembered that in using soluble alkali freely one risks the danger of change in acid-base balance of the blood, secondary hypersecretion, and renal calculi. In powder or tablet combination they are still widely used and when properly applied deserve their prominent therapeutic position.

Nonabsorbable antacids, such as colloidal aluminum hydroxide and phosphate, both in the reactive and non-reactive forms, have gained overwhelming favor in recent years. We avoid their use in stasis since they have a tendency to delay gastric emptying. The formation of aluminum chloride, irritating to the stomach unless alkali is present to reconvert it, is a disadvantage. In deficiency of pancreatic juice or in diarrhea they may produce phosphorus deficiency. These side effects, plus anorexia with resultant nutritional disturbance and constipation, detract from their efficiency.

Magnesium trisilicate in combination with colloidal aluminum hydroxide is more effective than aluminum hydroxide alone. It tends to combat the costive action of aluminum hydroxide, but alone lacks the neutralization efficiency and astringency of aluminum hydroxide.—*McHardy & Browne, New Orleans M. & S. J., May '50.*

Treatment of Myocardial Infarction—The question always arises as to when to hospitalize these patients. This should be done at once if adequate ambulance transportation is promptly available. In many cases these attacks occur on the street, in places of business, and so forth. Often the physician is called by a member of the family stating that the patient is already on his way to the hospital. If he has not left for the hospital, the ambulance is sent with instructions to begin oxygen immediately and await the doctor's arrival. Routinely, morphine and atropine are given intravenously. All effort is made to relieve pain and combat shock before moving the patient. This may take a few minutes or several hours. Physical examination should be limited to whatever is necessary to make the diagnosis. Oxygen should be continued until all pain, shock, cyanosis, and dyspnea have been relieved.

Complete physical, mental, and emotional rest are required from the onset, even if the diagnosis is only suspected. For the first few hours, 100 per cent oxygen should be administered by the BLB mask with a change later to the nasal catheter or preferably to the oxygen tent. The tent will give up to 60 per cent oxygen concentration, whereas with the nasal catheter approximately 48 per cent may be expected. Oxygen should be given to most patients with acute myocardial infarction since all have some local anoxia and varying degrees of anoxemia. Physiologically, increased oxygen saturation decreases respiratory effort, reduces the heart load, and aids in localizing the infarct, as well as improving the nutrition of the heart muscle.

In relief of pain, morphine is the drug par excellence, and the physician should not hesitate to give it up to 1 grain intravenously for prompt and often life-saving pain relief. For those who do not tolerate morphine, Dolophine, Demerol, or Dilaudid may be used. Relief of pain is essential to the control of shock, and persons in pain can tolerate relatively large amounts of morphine. Patients in deep shock get too slow response to morphine given subcutaneously because the circulation is inadequate to pick it up quickly. As the systolic pressure rises and sweating ceases, morphine should be given subcutaneously as often as necessary to keep the patient free from pain. Barbiturates should be used to promote rest. Phenobarbital, $\frac{1}{4}$ to $\frac{1}{2}$ grain every four hours, usually is sufficient.

Gilbert at Northwestern showed rather conclusively in animals that atropine was of distinct value in reducing the mortality and morbidity from acute myocardial infarction. Not only did it relieve reflex arterial spasm due to the infarction but arterial spasm caused by morphine as well. By depressing the vagus nerve, it thereby reduces the chance of arrhythmia. He recommended $\frac{1}{75}$ grain (54.2 mg.) intravenously immediately and smaller doses subcutaneously or sublingually at from three to four hour intervals for twenty-four hours after all pain disappears.—*Norman, Texas State J. Med., May '50.*

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THE 1950 MEETING

With a registration of more than 700, the 1950 meeting of the Association has passed into history carrying the plaudits of all those in attendance. There was widespread favorable comment on the character of the program provided by the President, Dr. Frank Wilson; and there were social events, too, that will long linger in the minds of the participants. Surely, the Jefferson County Medical Society went all out to see that everything moved forward without a hitch. It is no wonder then that in the closing minutes of the session a resolution was adopted by the Association praising the Society for its hospitality.

To guide the destinies of the organization in 1950-51, Dr. Joseph Marion Weldon of Mobile was elected President. A graduate of the Medical College of Alabama in the class of 1913, Dr. Weldon has long been prominently identified in medical circles in Mobile. Serving with him will be Vice-Presidents J. G. Daves, Cullman, J. O. Finney, Gadsden, A. J. Treherne, Atmore, and E. L. Gibson, Enterprise. Drs. E. V. Caldwell and J. O. Morgan will continue to serve on the State Board of Censors; and the Secretary-Treasurer was also selected for another term of five years. Counsellors chosen were Dr. J. Mac Bell, Mobile, E. T. Brunson,

Samson, J. M. Crawford, Arab, George A. Denison, Birmingham, R. C. Hill, York, J. Paul Jones, Camden, Hughes Kennedy, Birmingham, J. O. Lisenby, Atmore, J. A. Meadows, Birmingham, J. R. Morgan, Birmingham, R. C. Partlow, Tuscaloosa, Frank Riggs, Montgomery, and Arthur F. Wilkerson, Marion.

The meeting of 1951 will be in Mobile, April 19-21.

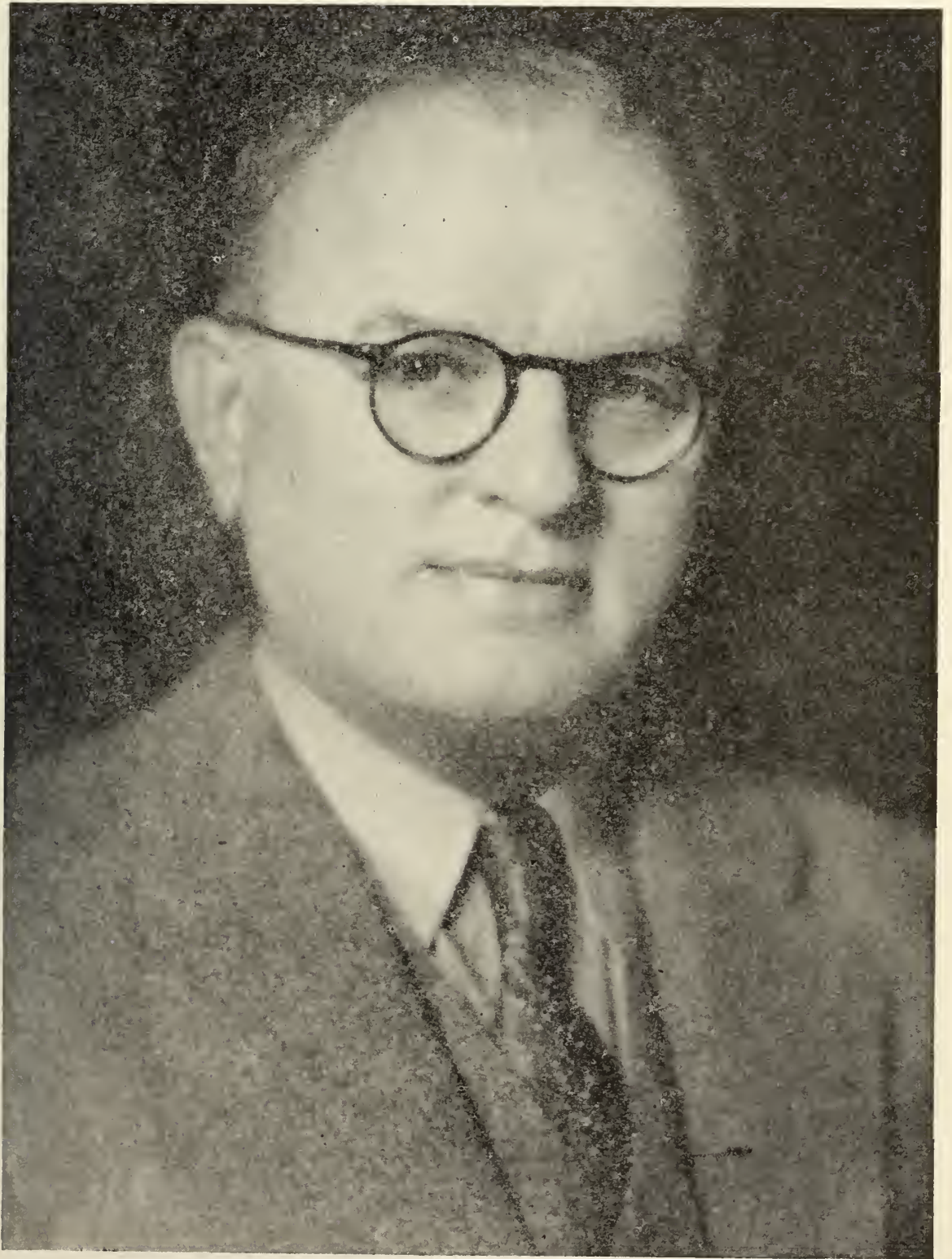
BRUCELLOSIS

"Acute human brucellosis responds promptly to treatment with aureomycin hydrochloride or with chloramphenicol (chloromycetin). Preliminary reports indicate that the majority of patients with chronic brucellosis also may be benefited by either drug. Final evaluation of these antibiotics, particularly in low grade, chronic and recurrent *Brucella* infections, must await studies with prolonged follow-up observations. Results of treatment usually must be judged solely on the patient's report of symptom abatement, as objective signs most frequently are lacking.

"In the 45 patients with diagnoses of chronic brucellosis comprising this series, encouraging initial results persist in most cases after follow-up periods of three to nine months. Chloramphenicol was used in 41 cases, and aureomycin was given in 4."

Thus do Ralston and Payne¹ begin their discussion of this subject. The authors go on to tell us that "chronic brucellosis probably constitutes the majority of *Brucella* infections. Proof of the diagnosis is difficult, as culture of the organisms from the blood or other body fluids is possible in no more than 25 per cent of the cases. Dermal sensitivity to various products of the growth of *Brucella* cultures suggests past or present infection but is not diagnostic of active brucellosis. Agglutination of *Brucella* by the patient's blood is a more dependable test, when the result is positive in dilutions of 1:40 or higher, or even in lower dilutions in patients with suggestive histories. In

1. Ralston, Robert J., and Payne, Eugene H.: Treatment of Chronic Brucellosis with Chloramphenicol and Aureomycin, J. A. M. A. 142: 159 (Jan. 21) 1950.



JOSEPH MARION WELDON, M. D.
President of the Association
1950-1951

chronic brucellosis, however, negative tests for agglutinins may be found in the majority of cases.

"Diagnosis must depend, therefore, on (1) a history of exposure to possibly infected animals or their products; (2) a vague, chronic illness characterized by fatigue, weakness, aches and pains, sweats and nervousness, with low grade fever which may be detected only after taking temperatures several times daily; (3) a normal or low leukocyte count, and (4) a low sedimentation rate. A positive result of one or more of the specific tests is helpful but not essential. Improvement during treatment with *Brucella* antigen appears to support the diagnosis."

The problem of chronic brucellosis continues to plague both the profession and the public at large; all the more so because it seems certain that in many cases the correct diagnosis is not made. It is to be hoped that other observers will be able to confirm the observations of Ralston and Payne. The authors tell us in conclusion that "forty patients believed to have chronic brucellosis were treated with chloramphenicol (chloromycetin) and were observed for three to eight months. Partial to complete relief of symptoms was obtained in 35 (87.5 per cent). Two of the 5 failures may be explained by erroneous diagnosis. Three relapses have occurred since the initial follow-up period."

MEDICAL SCIENCE STUDIES BOMB INJURIES

Medical science is trying to learn why an exploding bomb often produces internal injuries in a person without leaving any evidence of injury on the outside of the body.

In World War II investigators came across many persons who were either dead or in shock without finding any evidence of external injury to the body after an explosion.

Two x-ray specialists, writing in the April issue of *Radiology*, review in detail the case of a 45-year-old Negro dock worker who showed clinical and x-ray evidence of blast injury to the lungs which he suffered in a peacetime explosion.

The doctors are Martin Schneider and C. P. Klein, who are from the Department of

Radiology of the University of Texas School of Medicine at Galveston.

In the case of the Texas dock worker the doctors found that explosion produces a radically extending wave of increased pressure which compresses the chest and ruptures many of the small blood vessels in the lungs. The blast wave also causes ruptured ear drums and abdominal hemorrhages.

The dock worker was injured in Texas City on the morning of April 16, 1947, when a French freighter, loaded with ammonium nitrate, exploded.

The blast knocked him down and rolled him along the ground. He was subsequently soaked by the ensuing tidal wave. He did not hear or feel the blast. After being unconscious for an hour, he arose by himself, and was sent by ambulance to John Sealy Hospital in Galveston.

The patient complained of blurring of vision and deafness, headache, dizziness and pain in the chest and abdomen.

Many of the injuries, the doctors said, developed several days after the man had been admitted to the hospital. The doctors explained how each new injury was handled, pointing to the importance of x-ray films in making a diagnosis. Despite the multiple conditions which arose on each succeeding day after the blast, the man's life was saved.

The two Texas doctors said that in patients dying several days after suffering blast injury to the lungs hemorrhage is more extensive than in those who die earlier.

The pattern of injury, they said, often follows the lines of the ribs and in severe cases lacerations are seen under the ribs.

The doctors told of studies that have been made on animals. They described lung hemorrhage as one of the effects of the blast, the damage to the lung being produced during compression of the chest in the positive phase of the blast wave.

"By protecting the thorax of rabbits with a plaster cast, with wooden boxes, or with a thick layer of rubber, while leaving the head exposed, it has been found possible to prevent the development of pulmonary lesions," the article said, adding: "It has been shown, also, that the body surface fac-

ing the blast is invariably damaged more than the opposite side."

CANCER CAN MIMIC ALMOST EVERY CHEST CONDITION

Since cancer can mimic almost every chest condition known, two Philadelphia radiologists state that extreme caution must be taken before a definite diagnosis of cancer of the lung is made.

The doctors are Paul C. Swenson and Robert H. Leaming, who are connected with the Department of Radiology of the Jefferson Medical College and Hospital in Philadelphia. (Dr. Swenson addressed the Association in April.)

Writing in the May issue of *The American Journal of Roentgenology and Radium Therapy*, which is published primarily for physicians who specialize in x-ray diagnosis and treatment, the two Philadelphia doctors state that the problem of chest diagnosis is becoming more intricate. They said this was true even with the greater help "we are now receiving" from all the newest instruments and techniques developed for a better diagnosis."

"There was a time," they said in their article, "when the diagnosis of cancer of the lung was relatively rare. Now it is a necessary differential consideration for almost every chest lesion seen in an individual over 40 years of age."

In their article, the doctors told their colleagues that "we must emphasize an oft repeated axiom that a shadow of any character seen on the x-ray film is merely a record of gross pathology as reflected in the shadow contours, position and density. Knowing that cancer can, at some time or other, mimic almost every other chest condition known, the x-ray specialist must use caution in attempting to make a dogmatic diagnosis."

The x-ray, they explained, is still the best means for making an early diagnosis of any lung condition.

"Neither bronchoscopic examinations, nor the study of the bronchial secretions and sputum, tell the entire story, even though they all have served greatly to increase the accuracy of chest diagnosis," the doctors said, adding: "We have not yet arrived at

the point where we can hope that every atypical lesion which the bronchoscopist or the pathologist studies in this manner can be diagnosed unequivocally."

In discussing cases of suspected cancer of the lung, the doctors said "there is no time to lose." They said one might ask why not wait to watch the evolution of a lesion long enough to let the characteristics of rapidity of growth decide the case.

"The unfortunate fact," they said, "is that most lesions do not grow fast enough to prove their malignant character, and if one waits for this feature, they will in the meantime do infinite harm to the patient through distant spreading of the cancer."

The doctors offered this advice: "Every cavity in the lung must be considered as probably associated with tumor until proved otherwise."

Survey of Physicians' Incomes—The first report on the number of returns in the survey of physicians' incomes indicates that more than 37,000 replies have been received by the U. S. Department of Commerce to the 100,000 short form (white) questionnaires mailed out by the Department of Commerce several weeks ago. More than 50,000 returns are desired before June 15. Physicians who have not returned their white questionnaires, especially young physicians and others whose practices are not extensive, should do so soon. Another group of questionnaires is now being mailed to 25,000 physicians who did not receive white questionnaires. This group will be identified by the code number of the Bureau of Medical Economic Research on the returned franked envelope. The purpose of the identifying number is to enable the Bureau of Medical Economic Research to address follow-up questionnaires to physicians who do not reply to the first mailing. In fact, two follow-ups, if necessary, will be sent, in the hope of getting from 20,000 to 24,000 replies. Of this group, 10,000 will receive the short form (buff in color) schedules; 15,000 will receive the long form (green), which covers 1945 to 1948 as well as 1949. Some physicians have objected to question 9 (which is number 8 on the green copies) because the physician is required to record the name of his town, which, along with his specialty, seems to be a violation of the secrecy of the return. Only the size of the town is actually needed. The Department of Commerce insists that requesting the name of the town is the only accurate way to get the correct population size. It should be understood that a survey of physicians' incomes would have been made by the United States Department of Commerce alone if this joint survey had not been conducted.—*J. A. M. A., May 27, '50.*

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

NOW IS THE HOUR

W. A. Dozier, Jr.

Director of Public Relations

At its annual session in April the Association approved the five-point program which was stated in this column in the May Journal. The statement of its program by the Association is a good step forward and has been preceded by long hours of planning and discussion. Now, the work must really begin. A program or a plan is worthless unless it is pushed to fruition. This statement of program is not and must not be mere window dressing. Naturally the Committee on Medical Service and Public Relations will begin working on this plan immediately, but this is not enough. The help of every physician is needed. Then and only then may we make the progress that is necessary.

"How," you ask, "may I be of assistance?" Let us look at two of the points in the program and see how we may begin to work. By now all know of the argument of voluntary versus compulsory health insurance. Most of the dopesters say that the Administration's plan is dead for this session of Congress. Perhaps that is true, but it does not give us leave to sit back and forget matters. The fight now becomes a positive one; and perhaps, for a short time anyway, the medical profession may be on the offensive instead of the defensive, as has been the situation for some months past.

A great extension of voluntary prepayment health insurance has been effected by the various groups and companies offering such. To push this, however, each physician must take time to help. Do all of your patients have such insurance? If not, you may become the motivating factor in getting them interested enough to protect themselves. This of course means you must know the plans, the benefits, the costs, and the like. You, however, can be the greatest factor in getting the desired extension of coverage.

There is also another angle. Doubtlessly there are faults and inadequacies in present plans. You are the people who have access to such knowledge, for it is you and your patients who see the final results. A great service which you can render would be to take time to analyze this situation, ascertain why it arose, determine what is needed to keep a comparable set of circumstances from recurring, and then make constructive criticisms to the ruling group in the respective plan. Also, there was approved at the last annual session a resolution asking the incoming President to appoint a committee to look into just such matters. When that committee is set up, let those people know your thoughts. Thus progress may be made.

There are people who will say that point number two of the program, county care of indigents, is just so much chatter. Under this point the physicians have accepted anew the responsibility of caring for medical care of indigents. Such has been the case all along. The point is made, however, that hospitalization for indigents is not properly cared for in many counties. The statement further says, "It is suggested that the several counties provide, under present legislation, such care." Some people are certain to say that present legislation is not enough. The indigents still suffer. Let us look at the situation.

When counties, on their limited budgets, have done nothing though they are charged with this responsibility, it does not necessitate new legislation. The trouble lies with us, the residents. We have not sufficiently urged the ruling body to handle this matter, whereas other interests have been vocal and have been cared for because of having been heard. Therefore it behooves the public to make its will known. An effort to fulfill properly our present legislation should be made before new statutes are written.

What can we do here? It is doubtful that the actual situation is known in the indi-

vidual counties. Therefore much information must be gathered before a comprehensive plan may be drawn. Much of this information will have to be gathered on the local level and much of it will not be readily

at ainable. You, however, are the ones who have or can get this data and material, and you are the ones who will be asked to help. Do not shed this responsibility. We can find our own proper answer.

TRANSACTIONS OF THE ASSOCIATION

1950 SESSION

(Concluded)

Last Day, Saturday, April 22

The Association, sitting as the Board of Health of the State of Alabama, was called to order at 9:00 A. M. by the President, Dr. Frank C. Wilson.

The report of the Board of Censors was rendered by the Chairman, Dr. E. V. Caldwell, Huntsville.

THE SEVENTY-SIXTH ANNUAL REPORT OF THE STATE BOARD OF CENSORS, INCLUDING ITS REPORTS AS THE BOARD OF MEDICAL EXAMINERS AND AS A STATE COMMITTEE OF PUBLIC HEALTH

E. V. Caldwell, M. D., Chairman

The State Board of Censors, in conformity to constitutional mandate, has the honor to submit to this Association its Seventy-Sixth Annual Report.

MESSAGE OF THE PRESIDENT

The President's Message reveals a few of the responsibilities entailed in being the titular head of this Association. We expect the President to prepare the program for this annual meeting and to preside over our deliberations, but the demands made on his time during the year of office are extensive. In particular this past year he has been our official spokesman on matters pertaining to national legislation and in our contacts with our Senators and Congressmen. The Board wishes to commend him for his leadership in this field.

The President is concerned over the report of the Committee on Maternal and Child Health and the fact that twenty-seven of our counties make no provision for the care of indigents through antenatal clinics. Alabama's high maternal and infant mortality must be reduced and County Medical Societies have a responsibility to meet.

The coroner system in Alabama is antiquated in many respects. The President's recommendation can only be brought about by legislative action but it would appear that there should be

qualifications for coroner which would require medical knowledge.

The Board recommends that the incoming President appoint a committee to prepare suitable legislation for consideration by this Association at our next annual meeting, and if approved submitted to the Legislature for action.

The President cites the dangers of the National Socialistic Program and reviews the progress made the past year. The necessity of membership in the American Medical Association is stressed and the Board concurs.

The adoption of the President's Message is recommended.

The Board's recommendation was concurred in.

REPORTS OF THE VICE-PRESIDENTS

Dr. Frank Jordan, Vice-President of the Northeastern Division, was forced to resign due to ill health and Dr. J. O. Finney of Gadsden served in his stead.

The reports indicate activity on the part of your Vice-Presidents and some real thinking on the problems facing the medical profession. The suggestion of Dr. Gibson that where county societies have a very limited number of physicians a two-county or three-county meeting be held monthly is worthy of consideration. Each county society has certain legal functions to perform but a scientific program embracing a larger group would be more easily arranged and would provide for wider discussions.

The Board recommends adoption of the reports of the Vice-Presidents.

The reports of the Vice-Presidents were adopted.

REPORT OF THE SECRETARY-TREASURER

The report of the Secretary indicates that 90 per cent of the physicians in the State are members of the Association, the figure being 1758, as compared to 1749 a year ago. This solidarity of the profession at a time when governmental controls are threatened is encouraging. The total number of physicians in the State remained about constant—new additions balancing those removed from service.

The finances of the Association have been carefully audited and the audit reveals a slight balance of receipts over expenditures.

The Board recommends approval of the report.

The report was approved.

COMMITTEE ON PUBLICATION

The Journal continues to play an important role in providing a means for the publication of the numerous excellent papers presented before this Association, as well as for means of communication to the members. That it is able to do this within the finances available is a tribute to the Publishing Committee and the Board recommends the adoption of the report.

The Association concurred in the Board's recommendation.

REPORTS OF COMMITTEES

MEDICAL SERVICE AND PUBLIC RELATIONS

This report represents the first full year of activity under the direction of our full time director and demonstrates the extent of activities embraced. It is the feeling of the Board that today the medical profession is much more keenly aware of the numerous problems encompassed in medical service than at any time in history. Our congressional members have been advised concerning the feelings of the physicians in Alabama and we can be proud of the way they voted on the President's Reorganization Plan # 1.

The Committee recommends that the Association approve the program outlined in the pamphlet prepared for distribution at this meeting. This puts on paper a positive program for the Association that all can endorse. It should be read carefully by all members and the Board recommends its approval.

Further, the Committee recommends that a State Committee on Appeals be set up, which committee could function in any manner on matters referred to it by any person in any county or by any County Medical Society. The Board feels that the intent of such a committee is laudable, but believes that it would be impossible for a state committee to function on local questions. County Medical Societies should be able to arbitrate on local disturbances and it is difficult to see where a state group could work more effectively. The Board therefore recommends that the question of appeals or grievance committees be left as a county undertaking.

A third recommendation is to the effect that a policy of rotation be followed in appointing the membership of the Committee. The Board feels that the President of the Association should have full power to appoint all committee members and that this matter is one for him to consider in making his selections.

The Committee has lived within its budget and is to be commended for its activities. The Board recommends adoption of the report.

The Board's recommendations were concurred in.

MENTAL HYGIENE

The Committee summarized the advancement that has been made in the field of mental health in the State during the past year, and its report indicates real progress. The Alabama Hospitals, the University of Alabama, the lay groups and the Health Department are working closely in planning the work which seems to be on a sound foundation.

Efforts to have psychiatric nursing training given at Bryce Hospital are commendable. Nurses-in-training should be trained within the State if possible.

The Board recommends adoption of the report.

The report was adopted.

MATERNAL AND CHILD HEALTH

This Committee is confronted year after year with high maternal mortality rates and with a high infant mortality. True, the rates are better than in past years but they are still too high. The Committee particularly calls attention to the twenty-seven counties without prenatal clinics for the indigent. This is a responsibility that County Medical Societies must face. The problem of a delivery service for the indigent and particularly the Negro indigent cannot be solved by present medical setups and is part and parcel with the problem of general medical care for this group. The Association's stand on this is discussed previously.

The attention of the State Health Department is called to the recommendations regarding premature programs and the added training of midwives. These would seem to be logical undertakings for an official agency.

The Board recommends that those who have not done so review the exhibit of this Committee at this meeting and that we read the full report which will appear in the Journal at an early date.

The Board recommends adoption of the report.

The Association adopted the Board's Recommendation.

CANCER CONTROL

The report of this Committee indicates that continued progress is being made in the program against cancer although the number of deaths due to this disease continues to rise. Alabama has always had abnormally low death rates from cancer and this increase is probably more the result of better case finding and the educational program in bringing patients in for diagnosis than it is to any actual increase in incidence. The Cancer Seminar was an innovation this year and it is hoped it can be repeated.

The Legislature passed a bill to provide for the mass examination of adults as a case finding medium but it failed to appropriate any funds to put the program into effect, so the intent of the law must await further legislative action. The recent April issue of our Journal is devoted to cancer and the Committee is to be commended for its activity in the preparation of this issue.

The Board recommends the adoption of the report.

The report was adopted.

PREVENTION OF BLINDNESS AND DEAFNESS

This Committee has recommended to the Association certain criteria for admission to the School for the Blind, which criteria are in line with those set up by the National Society for the Prevention of Blindness.

The Board believes that the question of admissions is logically one for the Trustees of the School for the Deaf and Blind but that as a matter of information and for the guidance of physicians referring cases to the School the criteria should be publicized. The report of the Committee is recommended for adoption.

The Board's recommendation was adopted.

POSTGRADUATE STUDY

The work of this Committee, in cooperation with the Seminar Committee of the Medical College, in arranging for assemblies in various parts of the State is to be highly commended. The Board concurs in the wishes of the Committee for an expansion of this form of postgraduate instruction and believes it is the most effective program yet developed.

The Board is loath to recommend the increased funds requested from the Association if these funds can be obtained from the amounts available for education purposes through the Health Department. It recommends therefore that the Association make the same grant of \$1000.00 with the understanding that the Health Department honor vouchers up to an amount of \$1500.00. Vouchers were not submitted this past year until Association funds were expended. It is recommended that Association funds be held for unusual expenditures until the sums available from the Health Department are exhausted.

The Board recommends the adoption of the report.

The report was adopted.

INDUSTRIAL MEDICINE

This Committee has not been active for the past several years and the current members feel that its functions at present are not sufficiently important to warrant continuation. The Board therefore recommends that this standing Committee of the Association be discontinued.

The Association concurred in the Board's recommendation that this Committee be discontinued.

ANESTHESIOLOGY

The increase in the number of trained physicians in the field of anesthesiology is encouraging but the attention of the Association is directed to the increased opportunities offered at the Medical College and at the Employees' Hospital of the Tennessee, Coal, Iron and Railroad Company for courses at times convenient to the individual. The Board recommends the adoption of the report.

The report was adopted.

TUBERCULOSIS

Definite progress has been made in the field of tuberculosis but this only emphasizes what could be done by an all out attack now. The State needs more beds for tuberculosis patients and needs more state aid towards the maintenance of existing beds and beds that might be built. The bond issue for hospital construction earmarks certain funds for tuberculosis hospital construction and it is hoped that at least some of this will be used.

The report reveals the volume of work carried out in case-finding by the Health Department, but case-finding without treatment is of limited value. The medical profession must provide the leadership in securing adequate facilities and finances for tuberculosis work in Alabama. The medical profession must also provide the leadership in any program to put into practical use the knowledge now existing.

The Board commends the careful reading of the report by all members and the adoption of the report with its various recommendations.

The Association concurred in the views expressed by the Board.

LEGISLATION

Federal legislation since our last meeting has not produced any major action in the medical and health fields. Compulsory health insurance apparently will not come up for serious consideration at this session of Congress, and the fate of other major bills is questionable. Bills to provide federal aid to medical education, school health services and local health services are still in committee and may not reach the floor of Congress. Members are urged to keep up with developments as reported by our Director of Public Relations and to use their influence when indicated.

The Alabama Legislature has held a biennial session since the last meeting of the Association. Several matters of considerable importance to the medical profession were considered and some of them became law. Among the enacted bills were those to provide for:

1. Liberalization of the Workmen's Compensation Laws governing medical and hospital payments.

2. A Hospital Licensure Act, covering all hospitals and nursing homes.

3. A state bond issue of \$2,000,000 to assist in the construction of hospitals.

4. Clarification of limitation of local 4-mill tax for hospital purposes.

5. A cancer detection program. Unfortunately no funds were allocated and the law has not become operative.

6. Authorization to increase salaries of medical personnel in state service to a maximum of \$7,500.00.

7. Extension of the authority of the Water Improvement Advisory Committee Governing Stream Pollution.

8. Establishment of a collegiate school of nursing at the University of Alabama.

Medical and public health matters were given every consideration by the Legislature in the face of a recognized shortage of funds.

REPORT WITH REGARD TO FEDERAL AGENCIES

Federal appropriations continued to provide major financial support for the various health programs. Congress tends to make appropriations for specific programs and as a result some health problems receive much more financial assistance than others. Health departments have long urged more flexibility so that within a state determination of the relative needs might influence allotments but it is doubtful that Congress will change its pattern. At present the Public Health Service contributes to the operation of the Rapid Treatment Center and to the programs against venereal disease, cancer, tuberculosis, mental health, heart disease, stream pollution, typhus, malaria and general health with specific amounts for each. The Children's Bureau makes grants for maternal and child health, dentistry, nutrition and for special projects in the field of maternity and children's diseases. Administration of these funds remains a state responsibility and the federal agencies concerned have been meticulous in maintaining the correct channels of communication.

NURSE RECRUITMENT

The Alabama Hospital Association has recommended that the Medical Association of the State of Alabama appoint one member to sit with a member from the Alabama Hospital Association and one member from the Alabama Nurses Association for the purpose of developing ways and means to stimulate nurse recruitment through scholarships or other means. The Board recommends that the incoming President appoint such a representative from this Association.

The Board's recommendation was adopted.

ILLEGALS

The Association at its meeting last year authorized the expenditure of \$5000 by the Board of Medical Examiners for the prosecution of illegal practitioners. Progress has been slow and to date action is limited. The Board secured an attorney and devoted its first interest to the case of an "herb doctor." About the time evidence had been secured and the case was ready to proceed the individual concerned died. Since that time a firm of attorneys has been retained and is in process of preparing a case against one of the unlicensed chiropractors in the State. An inquiry to all County Medical Societies brought in a few names of illegals but by and large the chief concern is in the number of unlicensed chiropractors. They should either be removed from practice or should come under a licensing board.

The Board recommends that an additional \$3,000 be appropriated to the Board for use, if necessary, in the payment of legal fees for the prosecution of illegals.

The recommendation of the Board was adopted.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION

In 1949 the American Medical Association asked for a \$25 assessment from all its members but there was no compulsion in payment. At the meeting of the House of Delegates in Washington in December of 1949, however, membership dues were approved. The Board of Trustees recommended \$25 as the amount to be paid for 1950 and this was adopted. Obviously the American Medical Association cannot carry on its fight against compulsory health insurance and other socialistic proposals without money and it is the duty of every medical man eligible for membership to support his National Association. The Board commends those who met the assessment last year, and trusts that there will be a similar response this year.

CONSTITUTION OF THE MOBILE COUNTY MEDICAL SOCIETY

A new Constitution has been drawn up by Mobile County and, in accordance with Article XV, Section 1 of the Constitution of this Association, must be approved by the Association. This Constitution has been studied by the Attorney General's Department and does not appear to be in conflict with the Constitution of the Association. The Board therefore recommends approval of the revised Constitution of the Mobile County Medical Society.

The revised Constitution of the Mobile County Medical Society was approved by the Association.

ALABAMA HOSPITAL SERVICE CORPORATION

In 1945 the Association named six physicians to represent it on the Board of Trustees of the Hospital Service Corporation. These six men have never been changed, although two of them were removed, one by death and one by removal from the State. The Board feels that these six men should be appointed so that the terms of two of them will expire each year. It therefore recommends that beginning in January of 1951 the following physicians represent the Association: Dr. J. E. Moss of Mobile and Dr. J. P. Collier of Tuscaloosa for a term of one year; Dr. C. A. Grote of Huntsville and Dr. B. W. McNease of Fayette for a term of two years; Dr. J. Paul Jones of Camden and Dr. J. O. Morgan of Gadsden for a term of three years.

The Association approved the recommendation of the Board.

CONSTITUTIONAL AMENDMENTS

A year ago two amendments to the Constitution were proposed and they are now before the Association for consideration. The first, introduced by President J. Paul Jones, would provide for a president-elect. The second, suggested by Dr. Walter Scott, would give the right to hold office in the Association to any member who has been continuously identified with a county medical society in Alabama for five years.

AMENDMENT PROPOSED BY DR. JONES

The Board recommends that the Jones proposal be approved and that the Constitution of the Association be amended in the following particulars:

Amend Section 4 of Article IV, entitled Members, to read as follows:

"Section 4.—All members who have been members in good standing of a county medical society in Alabama for the five consecutive years immediately preceding any election to fill vacancies in the several offices of the Association shall be eligible to election to the office of president, president-elect, and vice-president."

Amend Section 1 of Article VIII, entitled Officers, to read as follows:

"Section 1.—The officers of the Association shall be: (1) a president; (2) a president-elect; (3) four vice-presidents; (4) a secretary; (5) a treasurer; (6) ten censors."

Amend Section 2 of Article VIII, entitled Officers, to read as follows:

"Section 2.—After the session of 1951, when both a president and a president-elect shall be chosen, a president-elect shall be elected annually. He shall serve as president-elect until the annual session next ensuing after his election and shall become president on his installation in the course of that session, serving thereafter as president until the installation of his successor.

"The vice-presidents shall be elected for four years, in such way as that one vacancy only will occur annually by expiration of official term; the secretary, for five years; the treasurer, for five years; the censors, for five years, in such way that two vacancies will occur annually by expiration of official term."

Further amend the Constitution by inserting between Article IX, entitled The President, and Article X, entitled The Vice-Presidents, an Article numbered IXA, entitled The President-Elect, to read as follows:

"Article IXA.—The President-Elect. Section 1.—The president-elect shall be an ex officio member of the standing committees of the Association."

"Section 2.—If the president-elect dies, resigns or is removed from office, the office of president-elect shall remain vacant and at the next annual session an eligible person shall be elected to serve as president until the next annual session.

On motion, duly seconded, the Association by voice vote concurred in the Board's recommendation; whereupon, in keeping with constitutional provision, the roll was called to determine if two-thirds of the Counsellors and Delegates in attendance were in favor of amending the Constitution; and the vote was unanimous.

Those voting *Aye*: Counsellors Abbott, Allgood, Baumhauer, Bell, Branch, Caldwell, Cannon, Collier, Craddock, Daves, Denison, Donald, J. M., Eskew, Garber, Gibson, Gill, Gipson, Gresham, Harper, Hubbard, Isbell, Jones, J. P., Kennedy, Littlejohn, Lull, McCown, McNease, Meadows, Moore, Morgan, J. O., Morgan, Ralph,

Oswalt, Perdue, Robinson, Rucker, Scott, Simpson, J. W., Tillman, Underwood, Weldon, White-side, Wilkinson, Wilson, Woodruff. Delegates Chapman, J. A., Ciemmons, Cotlin, Davidson, Godbold, Gordon, Gwin, Habeeb, Hale, Hamner, Hodges, Igou, Lawson, Lightfoot, Little, McCoy, McDonald, Marvin, Moore, E. M., Nichols, Paul, T. O., Paul, W. G., Petrey, Pritchett, Quimby, Robertson, J. B., Rogers, Sellers, Sims, Sorrell, Stinson, Thompson, Williams, J. C., Williams, J. R., Williams, S. J., Windham, Woodley.

Those voting *Nay*: None.

AMENDMENT PROPOSED BY DR. SCOTT

Dr. Scott's proposed constitutional amendment is to the effect that any member of the Medical Association of the State of Alabama in good standing for five years shall be eligible to be elected to any office in the Association.

As the matter now stands Section 4, Article IV, of the Constitution of the Association reads:

"All members who have been members in good standing of a county medical society in Alabama for the five consecutive years immediately preceding any election to fill vacancies in the several offices of the Association shall be eligible to election to the office of president and vice-presidents." President-elect has just been added to this section by your last vote.

Inasmuch as the Association, acting through its Board of Censors, is given certain law making functions affecting a wide range of interests over the State, it is natural that the Legislature should expect the Board of Censors to be elected from a tried and seasoned group within the Association or else the law making privilege might be withdrawn by the Legislature. Our College of Counsellors constitutes that constant group that stabilizes the Association, and the Board of Censors should be elected from this group.

The Board feels that it would be unwise to change the Constitution in this respect and therefore recommends the non-adoption of this amendment.

The Association concurred, a majority of Counsellors and Delegates present having voted to support the Board's recommendation that the amendment be not adopted.

RESOLUTIONS

BY DR. SEALE HARRIS

At the last annual meeting Dr. Harris proposed a resolution as follows:

"Be it ordained by the Medical Association of the State of Alabama:

"Section 1. That any physician who possesses a certificate of qualification granted by the State Board of Medical Examiners, and whose name has been recorded in the office of the probate judge, shall be elected to membership in a county medical society if two-thirds of the members casting their ballots are favorable to his election, and his application for membership is under consideration.

"Section 2. That articles in the constitution, by-laws or ordinances of the county medical so-

ciety, which are component parts of the Medical Association of the State of Alabama, that conflict with this ordinance shall be declared null and void."

This resolution was left over for one year since it appeared to require a change in the Constitution. Study of the Constitution reveals, however, that "county medical societies shall, subject to the approval of the Association, adopt rules and regulations for their own government, shall elect their own officers, and shall perform all needful acts not inconsistent with the Constitution, or ordinances, of this Association."—Art. XV, Sec. 3.

Each county society has adopted a Constitution and the qualifications for membership in a society are set out in the individual Constitution. It appears to the Board therefore that the change as advocated by Dr. Harris should rightly be made by county societies and if adopted by a society that the amended Constitution be presented for approval.

At this meeting a new Constitution for the Mobile County Medical Society was presented and approved. This Constitution contains the two-third clause and other societies, if they desire, may do likewise.

The Association concurred in the expression of the Board.

BY DR. E. W. RUCKER, JR.

"Whereas, The Medical Association of the State of Alabama has only two and one half days for its meeting, and all this time, both day and night, is needed to complete its program, and any other medical meeting at this time interferes with the state meeting, therefore be it

"Resolved, That the Medical Association of the State of Alabama go on record as opposed to any other medical meeting being held at this time, and requests that other meetings be held either the day before, or after its meeting, with the exception of the University of Alabama Banquet."

The Board recommends the approval of this resolution.

The resolution was adopted.

BY DR. HUGHES KENNEDY, JR.

"Be It Resolved: That the various committee reports and the reports of the several vice-presidents be presented to the membership of the Medical Association of the State of Alabama in printed form at the first session of its annual meeting rather than by oral presentation."

The Board feels that there may be times when matters of such prime importance or controversial nature are dealt with in a vice-president's report or the report of a committee that the vice-president or committee chairman may feel impelled to present his report in person, and the Board feels that the resolution, if passed, should be passed in a form that will permit a vice-president or committee chairman to read the report if he so desires. Therefore, the Board recommends the endorsement of the resolution in the following form;

"Be It Resolved: That the chairmen of the several committees of the Association and the several vice-presidents present their reports to the membership of the Medical Association of the State of Alabama in printed form at the first session of its annual meeting rather than by oral presentation if so desired by these officers."

The amended resolution was adopted by the Association.

BY DR. J. PAUL JONES

Whereas, House Bill No. 6000, passed by the House of Representatives, is now before the Finance Committee of the United States Senate; and

Whereas, The section pertaining to total and permanent disability in this bill is inimical to the American people themselves and to the American way of life, and

Whereas, The application of this section places the burden of proof of permanent and total disability directly upon the shoulders of the medical profession, which will result in a complete breakdown of the moral stamina of the people and their doctors; and

Whereas, This will be the greatest step toward socialized medicine which has yet been taken; therefore be it

Resolved, That the Medical Association of the State of Alabama, in meeting assembled, goes on record as being unalterably opposed to the total and permanent disability section in H. R. No. 6000; and be it further

Resolved, That a copy of this resolution be sent to each Representative and to each of the Senators of Alabama.

The Board recommends approval of this resolution.

The resolution was adopted.

Part I of the Board's report was adopted as a whole.

PART II

REPORT OF THE BOARD OF CENSORS AS A BOARD OF MEDICAL EXAMINERS

In this field of its activities the Board submits the following statistical report for 1949:

Medical certificates of qualification granted 106

(a) Physicians passing examinations	
June 28-30, 1949	46
(1) Certificates issued	16
(2) To be issued after internships	30
(b) Certificates granted applicants completing internships July 1, 1949	2
(c) Physicians granted reciprocity	80
(d) Diplomates of the National Board of Medical Examiners licensed	8
(e) Certificates of qualification revoked	2
(f) Physicians granted privilege to re-register for narcotic stamp	2
(g) Physician denied narcotic privilege	1
(h) Chiroprody renewal licenses issued	32

CERTIFICATES OF QUALIFICATION GRANTED JUNE
1949 APPLICANTS

Balzar, Reuben J.	Mohney, Jack B.
Bickham, Charles E., Jr.	Monsour, Howard P.
Cone, Theodore S.	O'Rear, Edgar A., Jr.
Corley, Luther F., Jr.	Petcher, Paul W.
Graves, Lauris D.	Ray, John A.
Johnson, Clifford A., Jr.	Swensson, Evert A.
Meigs, Stanley R.	Terry, Howard R., Jr.
Merrill, Joseph M.	White, Dewey A., Jr.

CERTIFICATES TO BE ISSUED AFTER ONE YEAR OF
SATISFACTORY INTERNSHIP

Almon, David T.	Johnson, Irene W.
Baird, Duke B.	Joyce, Margaret E.
Boggs, Lawrence K.	Kohen, Roland J.
Caden, John G., Jr.	Lauderdale, R. O., Jr.
Caldwell, Tom O.	Leo, Haskell D.
Carraway, Charles A.	Miller, Elaine D.
Carson, Bess Cline	Miller, James E.
Douglas, George C.	Myers, Ira Lee
Elia, Dominic R.	Neighbors, Jacob A.
Fowler, Inez	Peters, Myra Ann
Gentry, James H.	Powell, Francis M.
Goding, Ray F.	Screws, Carl, Jr.
Graham, James H.	Smoak, Henry E., Jr.
Haden, Hugh H., Jr.	Stansell, Evelyn L.
Hitchcock, Waldo P.	Stephens, Albert B., Jr.

CERTIFICATES GRANTED APPLICANTS COMPLET-
ING INTERNSHIPS JULY 1, 1949

Hodo, John B.	Weaver, Davis C.
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RECIPROCITY APPLICANTS RECEIVED DURING THE
CALENDAR YEAR OF 1949

Acree, Page W.—S. C.	Oct. 27, '49
Alexander, Jack W.—Mo.	July 29, '49
Alford, Almond W.—Mo.	May 23, '49
Augustine, Robert W.—Md.	Nov. 7, '49
Blackshear, Joseph R.—N. C.	July 22, '49
Blackwell, Claude C.—Tenn.	July 21, '49
Blankenship, H. D., Jr.—Tenn.	Feb. 21, '49
Bradford, F. D., Jr.—Tenn.	Oct. 27, '49
Brown, Charles A.—N. Y.	Jan. 7, '49
Camp, Ephriam E.—Tenn.	July 18, '49
Campbell, Lindsey D.—N. C.	June 24, '49
Carpenter, Edwin D.—La.	Aug. 8, '49
Coe, Howell D., Jr.—La.	July 1, '49
Davis, Thomas C.—La.	July 18, '49
de Shazo, William F., III—La.	July 27, '49
Dowling, J. D., Jr.—Mo.	June 3, '49
Durden, John G., Jr.—Ga.	May 2, '49
Evans, Owen B.—Ark.	Aug. 30, '49
Ford, Hugh G.—N. B. M. E.	Mar. 1, '49
Frommeyer, W. B., Jr.—Ohio	July 6, '49
Geheber, Dean W.—Ga.	Sept. 16, '49
Gelb, Maurice—N. Y.	Feb. 16, '49
Gillespie, S. D., Jr.—Ga.	June 24, '49
Goldstein, Hyman I.—N. J.	Apr. 18, '49
Gowaty, Henry Jacob—Pa.	Jan. 10, '49
Graham, Stanley E.—La.	Sept. 6, '49
Green, Louis D.—Tenn.	July 11, '49
Harsh, John F.—N. B. M. E.	Apr. 5, '49
Healy, Maurice J.—Iowa	July 21, '49
Henry, Margaret L.—Mo.	Oct. 17, '49
Higgins, Robert F.—Tenn.	Feb. 21, '49
Holton, John B.—Tenn.	Feb. 14, '49

Hume, John F.—Ohio	Aug. 15, '49
Hurteau, William W.—Iowa	Aug. 17, '49
Hutchinson, Henry H.—Mo.	June 10, '49
Johnson, B. H., Jr.—Miss.	Oct. 17, '49
Johnson, George L.—Ga.	Feb. 16, '49
Johnston, Eugene R.—Va.	Apr. 18, '49
Lane, Robert E.—Ill.	Aug. 17, '49
Lett, Joseph R.—La.	Oct. 27, '49
Lewis, Albert G., Jr.—N. B. M. E.	Aug. 25, '49
Lilly, Charles O.—La.	Oct. 20, '49
Lord, Jethro Dean, Jr.—Ark.	May 2, '49
Lovegren, Lloyd A.—N. C.	Aug. 17, '49
Low, Robert Edward—La.	July 13, '49
Luther, Gertrude—Minn.	July 11, '49
Marino, Joseph B.—La.	Oct. 20, '49
Marzoni, Francis A.—Tenn.	Dec. 12, '49
McDow, Preston C.—Tenn.	July 18, '49
McNally, William D.—Ill.	Dec. 19, '49
Messer, Addison Lee—N. B. M. E.	Aug. 5, '49
Mighell, Joseph R., III—La.	June 24, '49
Mitchell, Joseph R.—Ill.	Apr. 5, '49
Mize, John Robert—Texas	June 9, '49
Moffett, Alexander S.—Tenn.	Nov. 23, '49
Morris, John T., Jr.—Md.	July 6, '49
Morris, Sylvia—Iowa	July 27, '49
Mortensen, A. V. N.—La.	June 24, '49
Ohler, Raymond A.—Ky.	July 22, '49
Ortman, Gareth S.—Kan.	Feb. 21, '49
Park, O. K., Jr.—Mo.	Mar. 28, '49
Pitt, McCoy B.—N. B. M. E.	Oct. 17, '49
Polewoda, W. W.—La.	Oct. 7, '49
Poyner, James A.—La.	Jan. 21, '49
Pressly, James B.—Tenn.	June 9, '49
Putzel, Charles L., Jr.—N. C.	Sept. 15, '49
Quimby, James E.—N. B. M. E.	June 24, '49
Ragsdale, Milton C., III—N. B. M. E.	Apr. 14, '49
Ramey, Charles William—Georgia	June 24, '49
Robinson, John W.—Tenn.	Aug. 8, '49
Rubin, Milton B.—La.	July 21, '49
Scott, Morgan E.—La.	June 24, '49
Sharman, Lewis C.—Ga.	July 1, '49
Sims, Dorsey T.—Ark.	June 24, '49
Slappey, Donald H.—Ga.	Aug. 8, '49
Smith, Marvin D.—Miss.	June 24, '49
Snow, Robert L., Jr.—La.	June 27, '49
Stokes, Georgia H.—S. C.	Apr. 18, '49
Sutton, William R.—Tenn.	May 23, '49
Taylor, Clayton D.—Texas	Feb. 7, '49
Taylor, Lloyd M.—N. B. M. E.	Aug. 15, '49
Turk, William B.—La.	Jan. 21, '49
Weathers, M. H., Jr.—Tenn.	Apr. 15, '49
Walsh, Charles M., III.—Va.	July 1, '49
Weathers, M. H., Jr.—Tenn.	Apr. 15, '49
Wells, Edmond D.—Ky.	Feb. 4, '49
Williams, Thomas H., Jr.—Tenn.	Aug. 8, '49
Yancey, Asa G.—Mich.	May 23, '49

CHIROPODY RENEWAL LICENSES ISSUED FOR 1950

AuCoin, William John	Mobile
Benitez, George W.	Birmingham
Blotzer, Ellen Louise	Mobile
Blotzer, John Sheldon	Mobile
Carlisle, Alexander Randolph	Montgomery
Carter, Harry Shipley	Florence
Clark, George Elwood	Birmingham
Coleman, Jasper Clinton	Dothan
Cooper, John Marvin	Birmingham

Crowley, Coy Hiram	Mobile
Crowley, Gentry Ballew	Huntsville
Daniels, John Edgar	Montgomery
Davis, Edith M.	Birmingham
DeViso, Viola	Fairfield
Dixon, Mildred K.	Tuskegee Institute
Draper, William Loyt	Birmingham
Edwards, Charles Mortimer	Birmingham
Leighty, Fred Granville	Birmingham
Lewis, Martin	Florence
Miller, John	Mobile
Oxford, Herman Ross Arnold	Tuscaloosa
Pearson, Joe Price	Birmingham
Peterson, Bessie Cook	Birmingham
Plevine, Erich Herman	Gadsden
Rae, Hugh	Chicago
Riccio, Peter Domenick	Bridgeport, Conn.
Rollings, Harry Hartupsee	Montgomery
Sealy, Ariel Lewis	Montgomery
Sealy, Elizabeth Pepperman	Montgomery
Silverman, Isidor	Birmingham
White, Juddie Benjamin	Birmingham
Wright, Thomas Leolin	Selma

Part II of the Board's report was adopted.

PART III

REPORT OF THE BOARD OF CENSORS AS A STATE COMMITTEE OF PUBLIC HEALTH

D. G. Gill, M. D.
State Health Officer

PREFACE

The year 1949 was another in a series of favorable years in so far as general health conditions were concerned. The State experienced another year of high birth rates and low death rates with an excess of births over deaths of some 57,000. Year by year Alabama is contributing largely to the national increase in population but apparently is not receiving the benefits of a materially increasing population of its own. The 1950 census will certainly not show an increase in state population corresponding to the excess of births over deaths during this decade.

A high birth rate accentuates the problems of maternal and infant care and in general increases the problem of the communicable diseases. It is gratifying therefore to report the lowest maternal mortality in Alabama's history and an infant mortality rate below the five-year average, although above that of 1948. Measles was epidemic during the year and parts of the State experienced high incidences of poliomyelitis. Diphtheria, whooping cough and scarlet fever were materially reduced, while typhoid fever was responsible for only a single death. Malaria continued to be at a minimum and at present it is hard to find laboratory evidence of infection. Tuberculosis set a new low in deaths, although still in sixth place as a cause of death. Syphilis was another disease to show the effect of the accentuated program and decreased to a new low. The diseases of adult life and old age are increasing with heart and cancer deaths setting new high records each year. With increased numbers of people living to old age, this is to be expected, but deaths in the productive years of life from these causes are susceptible to prevention.

ADMINISTRATION

HOSPITAL PLANNING

During the year rapid strides were made in hospital and health center construction, using funds provided by the Hill-Burton Act. At the end of the year there were three completed facilities: George H. Lanier Memorial Hospital, Langdale; Mizell Memorial Hospital, Opp; and Jefferson County Health Center, Birmingham. Fifteen more facilities were under construction.

So much interest in the program was evinced throughout the State that ten architects interested in hospital design attended a seminar on hospital and health center design and construction held by the U. S. Public Health Service in Washington in February. Approximately fifty architects, hospital consultants and engineers, together with hospital administrators and state agency officials, attended the Southern Conference on Hospital Planning held in Biloxi in May.

Three important pieces of legislation affecting the hospital program were enacted by the 1949 Legislature. These Acts permitted the issuance of bonds against a county mill tax for hospital construction and maintenance, allowed the State to issue \$2,000,000 in general obligation bonds to aid in hospital construction, and authorized licensure of all hospitals and allied facilities. The first two were submitted to the people on December 13 and carried by a wide margin. The Legislature also authorized the creation of hospital boards, in addition to county-wide hospital associations.

The Department, together with other state agencies administering the Hill-Burton program in Region VI of the U. S. Public Health Service, sponsored an institute for administrators opening new hospitals under this program.

Representatives of the Department visited every section of the State at the request of local communities to assist in setting up hospital associations, inspecting and approving sites, aiding in making up equipment lists and attending bid openings.

MENTAL HYGIENE

On January 1, 1949 the Division of Mental Hygiene consisted of an administrative office in Birmingham staffed by a psychiatrist, a social worker and a secretary. and a two and one half day per week all-purpose psychiatric clinic operated in cooperation with the Medical College of Alabama. This was staffed by one full-time psychiatrist, two part-time psychiatrists, one full-time social worker, one part-time psychologist, and one full-time secretary. On March 15, 1949 in cooperation with the Research Interpretation Council of the Alabama Polytechnic Institute, the Division began the monthly publication of a bulletin entitled *Alabama Mental Health*. On October 1 a full-time colored psychologist was added to the staff of the Birmingham office and the Medical College Clinic. On October 15 a five half day per week all-purpose psychiatric clinic was opened at the Bryce Hospital, staffed by one full-time social worker, one full-time stenographer, five part-time psychiatrists, one part-time psychologist and one part-time psychiatric nurse.

MACHINE TABULATION

The Division of Machine Tabulation, acting in the capacity of a service division, processed work for various bureaus and divisions during 1949.

The work done for the Bureau of Preventable Diseases continued to demand a major portion of the time spent. The preparing of the statewide statistics for the first blood test survey, coupled with the statistics and indexes of the second survey, was the largest single operation.

Work was continued on the indexing and statistical analysis of the mass T.B. x-raying.

With the coming of the Multiphasic Screening Program, the records of both the blood testing and T.B. x-ray programs were dovetailed, with blood sugar and heart diagnosis reports added. This required complete revision of the record-keeping system.

This Division continued to prepare the annual statistical tables for communicable diseases and monthly venereal disease morbidity reports for the U. S. Public Health Service, State Health Department and County Health Departments.

For the Bureau of Vital Statistics, currently reported birth, death, marriage, divorce and still-birth certificates were transcribed to punch cards. Monthly, quarterly and annual statistics were prepared from these. Monthly and annual indexes were also prepared on births, deaths and marriages.

The work was continued on the re-indexing of the births which were reported between 1908 and 1926.

For the Bureau of Maternal and Child Health, work was continued on the analysis of the records of the Emergency Maternal and Infant Care program.

For the Bureau of County Health Work, a summary of the monthly activities report was prepared quarterly for the director of this Bureau.

For the Bureau of Sanitation, statistics were prepared on the sanitary surveys made in several counties.

PUBLIC HEALTH EDUCATION

The Division of Public Health Education enjoyed in 1949, as in previous years, the friendly and helpful cooperation of the newspapers, the radio stations and other agencies for the dissemination of health information. For that the staff is grateful.

The two Montgomery daily papers published 398 stories based upon releases issued by this Division. No information is available on the number of such articles published in other papers. However, indications are that they, too, devoted considerable space to this material. The weekly health article, *State Health Chat*, was distributed by the Montgomery Bureau of the Associated Press to A.P. papers. That has been done for a number of years.

Station WCOV in Montgomery and Station WGWC in Selma carried the weekly radio talks which were listed in the printed radio programs under the title "Health Is Wealth." Time for these broadcasts was given without charge by the sta-

tions. There was also no charge for the use of telephone wires between these two stations.

Near the end of the year arrangements were made for carrying these weekly radio health messages to the people of other sections of the State by means of electrical transcriptions. Eight stations readily agreed to broadcast them regularly as a public service, sending the transcriptions on to other stations after using them. It is planned to get the new program actually under way early in the new year. It is also planned to lengthen the chain of stations as rapidly as practicable. The transcriptions will be made, either at the time of the original broadcasts or in the transcription studios, by Mr. Sebie Smith of Station WSFA, Montgomery.

As in the past, the weekly radio talks were mimeographed for distribution as health education material. Many requests have been received for them from people both within and outside the State.

The Film Library continued its work of teaching health through the magic of the sound film. Sixty-three of the state's 67 County Health Departments were members at the year's end. As in the past, film bookings were limited to them, with the understanding of course that they could make the films available to whatever organizations, agencies or individuals they might see fit. The County Health Departments, rather than the actual users, were held responsible for the films' safety and return when promised. Bookings in 1949 totaled 670.

A few changes were made in the form letters used in the operation of the Film Library. It is believed that these have been helpful.

Other activities carried on in previous years were also carried on in 1949. Booklets were distributed. The State Health Department's annual report and special reports were edited. Books were reviewed for the *Journal of the Medical Association of the State of Alabama*. Information was furnished by correspondence. The Division cooperated with other official and unofficial agencies to further a general lifting of health knowledge levels all along the line.

COUNTY HEALTH WORK

Activities and accomplishments in county health work in 1949 are reflected in the following consolidated report embracing all of the State's 67 counties.

Communicable Disease Control

Admissions to service.....	1402
Consultations with physicians.....	989
Field visits.....	8120
Smallpox immunizations.....	58275
Diphtheria immunizations.....	79554
Typhoid fever immunizations.....	236182
Pertussis immunizations.....	21550

Venereal Disease Control

Admissions to medical service.....	12787
Clinic visits.....	34158
Field visits.....	11884

Tuberculosis Control

Individuals admitted to medical service....	9587
Individuals admitted to nursing service....	7315
Clinic visits.....	59769
Field visits.....	52182

Maternity Service

Cases admitted to medical service	17046
Cases admitted to nursing service	18540
Visits by antepartum cases to medical conferences	38017
Nursing visits.....	49231

Infant Hygiene

Individuals admitted to medical service....	7951
Individuals admitted to nursing service....	155100
Visits to medical conferences	22659
Nursing visits.....	57774

Preschool Hygiene

Individuals admitted to medical service....	8938
Individuals admitted to nursing service	7216
Visits to medical conferences.....	20474
Nursing visits	34169
Inspections by dentists and dental hygienists	1806

School Hygiene

Inspections by physicians or nurses	86945
Examinations by physicians.....	28658
Individuals admitted to nursing service	2268
Nursing visits	7731
Inspections by dentists and dental hygienists	12306

Adult Hygiene

Medical examinations	9262
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Morbidity Service

Medical visits.....	1066
Nursing visits	5033
Admissions to hospitals	278

General Sanitation

Approved individual water supplies installed	654
Approved excreta disposal systems installed	15157
Field visits	100339

Protection of Food and Milk

Food-handling establishments registered for supervision	12712
Field visits to food-handling establishments	90274
Dairy farms registered for supervision	1706
Field visits to dairy farms.....	18880
Milk plants registered for supervision	404
Field visits to milk plants.....	8358

Laboratory

Specimens examined	493640
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PUBLIC HEALTH NURSING

The personnel of the Division of Public Health Nursing consisted of three nurses and one secretary.

Staff education in public health nursing in the form of conferences and institutes held were as follows:

Maternal and child health: one conference serving six counties; pediatric conference, Birmingham; attendance (statewide), 45; cancer institutes: eight one-day meetings held at strategic points in State with a total attendance of 556; venereal disease: three public health nurses spent one week in orientation at the Mid-South Medical Center in Birmingham; tuberculosis: public health nurses from 14 north Alabama counties visited the Morgan County Tuberculosis Sanatorium for one day of inspection; pediatric conferences: five nurses attended a one-week conference at Meharry Medical College in Nashville.

In addition to the above, eight nurses were registered for the program of study in public health nursing.

In addition to the organized instruction reported above, the advisory nurses visited 45 counties, making 102 visits for purposes of appraisal of nursing service and instruction.

Recruitment activities were continuous, with the supply of nurses still short of the demand. Two counties were without the services of a public health nurse at the end of the year and vacancies existed in a number of counties.

At the end of the year a total of 356 nurses were engaged in public health nursing distributed as follows:

State Health Department, 5; State Department of Education, 6; County Health Departments, 192; City and County Boards of Education, 10; Visiting Nurse Association of Birmingham, 5; Metropolitan Life Insurance Co., 4; Industries, 134.

MERIT SYSTEM

The Merit System for County Health Work administered competitive examinations during the year for positions in the following classes: Clerk I and II, Typist I and II, and Sanitation Officer I and II. These examinations were conducted on an open-continuous basis. From the eligible lists established as a result of the examinations, 33 appointments were made. In addition, 15 appointments were made from eligible lists established previously. A promotional examination was given for the class of Sanitation Officer II, resulting in 4 appointments from the promotional register.

The Sanitation Officer series was revised, and a new class of Sanitation Officer III was established. Affected employees were reclassified accordingly. A new class of Meat and/or Milk Inspector II was adopted.

Revised salary ranges were approved by the Merit System Council for the classes of Sanitation Officer I and II, Public Health Engineer and Graduate Registered Nurse I.

The Merit System Council approved several changes in the rules and regulations concerning leave regulations and one minor change in the duration of employment registers.

MATERNAL AND CHILD HEALTH

Although maternal death rates are being reduced in the State, a large part of that reduction is due to the generosity, patriotism and human interest on the part of general practitioners,

obstetricians and pediatricians and the intense educational program which has developed a keener appreciation of better medical care. Therefore the whole maternal and medical care program is gradually improving in so far as the white population is concerned.

In 1948 there were eighty-three prenatal clinics held in thirty-eight counties in Alabama, whereas in 1949 there were eighty-seven prenatal clinics held in forty counties. Every effort possible will be made to expand this service until every expectant mother is provided with adequate medical care. With the expansion of hospital facilities, better distribution of physicians, improvement in farm-to-market highways, and increased interest on the part of physicians and health and welfare workers, much improvement in this activity will continue to be made.

There is equally as much interest in the infant and preschool problems. In 1948 there were thirty-four well-baby clinics held in twenty-one counties, whereas in 1949 there were forty-two well-baby clinics held in twenty-four counties. The American Academy of Pediatrics, through its state organizations, fully realizes the importance of this problem and has made a comprehensive survey of facilities in Alabama. This study was made under the guidance of the state chairman of the Alabama Pediatric Society, Dr. Clifford L. Lamar, of Birmingham. The study is interesting, stimulating and of great value. It indicates that only seven areas in Alabama are within twenty-five miles of a pediatrician. This report is recommended for perusal and adoption. Plans are under way in the State Health Department to follow Item V of these recommendations, especially those items pertaining to refresher courses for physicians and nurses, and the furnishing of portable incubators. In 1948 there were forty-two portable baby incubators distributed to twenty-nine counties in Alabama, whereas in 1949 forty-eight were distributed to thirty-one counties. These will be made available to physicians through the County Health Officers until the State is covered.

The State Health Department recognizes and appreciates the State Medical Association's Committee on Maternal and Child Health, comprised of Drs. T. M. Boulware, A. E. Thomas and Hughes Kennedy, Jr. This Committee has performed an extraordinary service to Alabama. Its members have studied the maternal and infant death rates by counties and the problems pertaining to the counties and continue to make efforts through County Medical Societies to improve the situation.

A summary concerning maternal and infant mortality rates and other pertinent information will appear in the Department's annual printed report.

The State Health Department, in cooperation with County Health Departments, sponsored sixty-two dental clinics in thirty-nine counties. Approximately 12,700 patients were admitted. They made 17,922 visits.

At the end of the year 76 local practicing dentists were participating in the dental care program. Employed on a part-time basis, they devoted

ed 11,378 hours to this work and completed dental care for 5,803 patients.

The U.S. Public Health Service placed in Alabama two dental crews, one white and one colored, to demonstrate in schools the topical application of sodium fluoride. All reports indicate that there was at least a 40 per cent reduction in the incidence of dental caries.

These two teams put on demonstrations in eleven counties and treated approximately 7,985 children. The personnel of each team consisted of one dentist, two dental hygienists and one clerk. All operating expenses were provided with Federal funds.

The locations and the number of children to be treated were chosen by the Director of the Division of Dental Health, and Montgomery was the base from which these teams worked. The dental care program for 1949 represented an increase of about 100 per cent over that for the previous year. An even larger program is contemplated for 1950. The program now under way is the most ambitious ever carried on in Alabama.

An attempt was made and continues to be made to improve the quality of life through good nutrition for everyone by means of various phases of nutrition services.

Nutrition educational service and material are available for the staffs of State and County Health Departments, teachers, social workers, school lunch workers and others seeking nutrition information. Thus, nutrition education moves forward, not only through the efforts of the nutritionist but also through the efforts of the many people with whom she works.

The nutritionist made visits to ninety-seven school lunchrooms in thirty-six counties. She was accompanied on each visit by the sanitation officer, county nurse or supervisor of the lunchrooms. Her visits were for the purpose of observation and encouragement of the proper kind and amount of food to be served and also for making her comments at the conferences more helpful to the school lunch workers. The sanitation officers in the local health departments are doing an excellent piece of work in the school lunchrooms in the State, not only in sanitation as such but also by emphasizing the importance of safe milk and water supply and insisting that all other foods served be free from harmful bacteria.

Two full weeks were devoted to a conference of school lunchroom workers which is held each summer at the University of Alabama. This conference or workshop was attended by approximately 250 workers and in addition was visited by many school principals, teachers and others interested in nutrition and health.

During the year, officials in the public schools indicated increasing interest in nutritional improvement of children under their supervision by requests for material on teaching nutrition in the classroom. To meet this need, mimeographed lists of sources of good material were assembled and distributed.

Since the county nurses need to know and teach many other things besides nutrition, one major objective of the nutritionist is to help

them keep up to date on the science of nutrition and down to earth in the application of the newer knowledge in this field.

At the request of county nurses, visits were made to discuss the problem of families needing definite nutrition assistance, and an effort was made to describe the relation of food to health in such a way as to be stimulating, understandable and practical.

Nutrition leaflets, pamphlets and exhibit materials were made available to the nurses, teachers, social workers and others interested in nutrition.

In an effort to teach as many patients as possible, individual conferences on nutrition were provided at maternal, crippled children's, pre-school and chest clinics.

Various phases of nutrition and child health were discussed with Parent-Teacher Associations, high school students, teachers and a group of student nurses.

Adequate nutrition is a problem that involves many agencies and organizations, and to provide a good program requires cooperation of all these at both state and county levels.

Provisions were also made to assist in the purchasing of some equipment to maintain the hard of hearing program established at the Medical College of Alabama for the development of this program. The following report was submitted by the Director of the Department of Otolaryngology and Broncho-Esophagology:

Number examined (audiograms)	718
Normal hearing	431
Number with defective hearing	287
Number with conduction deafness	170
Number brought to normal with treatment	38
T. & A.	19
Adenoidectomy	1
Radium	2
T. & A. and radium	13
Adenoidectomy and radium	1
No treatments	2

The Macon County Medical Care Program provides care for colored maternity cases and sick infants in Macon County and the six near-by counties. There were 705 deliveries in 1949, with 671 live births and 34 stillbirths. Forty of these deliveries were by cesarean section. The maternal death rate was 14.20 per 1,000 live births, while the stillbirth rate was 47.98 and the neonatal death rate 24.14. There were 64 premature babies (5½ lbs. or less). Only 12 mothers, or 1.704 per cent, had puerperal infection. Funds for this program were provided by a special grant from the U.S. Children's Bureau.

LABORATORIES

The Department's laboratory activities were largely routine in nature. There was a slight decrease in total specimens examined, due entirely to fewer tests for syphilis as a result of the state-wide survey. All other tests showed an increase. Increased production of vaccines prepared by the Central Laboratory shows that greater use is being made of these important preventives. The

most decided increase was in tuberculosis control work.

Apart from actual routine, four special projects were accomplished: (1) The *Laboratory Manual* was revised and now includes all new procedures pertinent to public health work. (2) A special malaria survey of TVA personnel in the State was made on 2,176 employees without finding a single case. (3) A conference of Branch Laboratory directors was held to consider mutual problems and to demonstrate new procedures embodied in the revised manual. This was productive of a much better understanding of needs and it is planned to hold this at least annually in the future. (4) A chart, listing all tests made by the laboratories, with directions as to how and where to send particular specimens, was prepared for issue to every physician in the State. So much depends upon this that it fills a long-felt want in obviating vexatious and dangerous delays.

Four members of the Bureau staff were sent to outside laboratories for instruction: one to the State Laboratory in Indianapolis and three to the Communicable Disease Center in Atlanta.

PREVENTABLE DISEASES

Communicable disease flare-ups remained confined to measles and poliomyelitis. The last two months of 1948 saw the fanning of a measles epidemic that flamed into being in 1949 and produced 11,343 cases. Poliomyelitis continued its infiltrating attack until 243 individuals were involved. Although there was no epidemic concentration, still the number of cases exceeded those of the previous year. It may be that the normal incidence of poliomyelitis is rising to new levels.

Diphtheria dropped from the 614 cases of 1948 to 358 in 1949. Typhoid fever remained about the same, with 55 cases. There were eight cases of paratyphoid. These three diseases are still too high, especially in the face of the known preventive measures.

The decline to 900 in cancer cases treated in tumor clinics was a false one. Because of limited funds, certain types of cancer were not eligible for free clinic service.

The mass chest x-ray program was carried to thirteen counties, and 159,346 people were x-rayed. Of these, 332 were found to have tuberculosis, and 1,332 were found suspicious for that disease.

A new Division of Heart Disease Control was added in July, and by September work was in progress. Since the x-ray offered the most productive means of finding heart disease, most of the heart disease control program was incorporated in the mass chest x-ray program. Each film taken was read for both tuberculosis and heart disease. As a result, out of the 78,228 people x-rayed, 227 showed heart disease and 778 were found suspicious for that disease.

The mass blood-testing program was carried to nineteen counties, and 299,966 persons were blood tested, with 9,607 found infected or tentatively positive for the disease.

Admissions to the Rapid Treatment Center declined to 12,836 patients. Of these, 1,571, or 12.23 per cent, were diagnosed as having primary or secondary syphilis, and 6,821, or 53.13 per cent, were diagnosed as having early syphilis. In July, treatment was changed from one injection of aqueous penicillin daily for twelve days to procaine penicillin administered once a day for five days.

In November, treatment in the field of syphilis cases found as a result of mass blood testing was begun. A daily injection of procaine penicillin was given for three doses.

In November, mass surveying for diabetes was begun. And at that time the mass attack against the four forms of illness (heart disease, tuberculosis, diabetes and syphilis) was incorporated into one survey. Each person appearing at the stations was x-rayed for tuberculosis and heart disease, and blood was examined for diabetes and syphilis. Of the 38,165 persons examined for diabetes, 2,055 gave provisional positive tests for the disease.

To examine bloods for diabetes, it was necessary to set up a streamlined section in the mass blood-testing laboratory. For syphilis and diabetes this laboratory examined 430,076 specimens.

The Industrial Hygiene Unit visited 103 industries and made 261 field and laboratory determinations for industrial hazards. With the beginning of multiple screening, one engineer was detailed to a county during the two-week education period in order to get industrial cooperation and response.

SANITATION

The Department's responsibility in the field of sanitation is the application of engineering and sanitary measures to the environment of our people in an effort to control certain communicable diseases. This responsibility is met both by operating as a unit of the central administration and by giving technical services and direction to county health units.

This dual function leads to completeness of effort. It coordinates activities and checks performances. The work of the Bureau of Sanitation is carried on by the Divisions of General Sanitation, Water Supply and Sewage, Stream Sanitation, Typhus Control, Malaria Control, Inspection and the Drafting Section.

The Division of General Sanitation at one time was engaged almost entirely in the promotion of pit privy programs, through County Health Departments, both in municipalities and in rural areas where properties were not available to sewers. It is fully realized that when people elect to live in densely populated areas the individual can no longer live to himself but is subject to the habits of those around him. Communities that have not fulfilled their responsibilities in properly and adequately disposing of their wastes are subject to outbreaks of communicable diseases. It is not because sewage facilities other than sewer connections are no longer a problem that work in this field has not

been as active as in former years; for it is estimated that there are over 300,000 homes in Alabama with inadequate sanitation and the incidence of hookworm infestation is probably as high as in past years. However, demands made by the public upon health workers in other fields of activity have necessarily caused workers to give more time to these phases of environmental sanitation. Practically all programs of an environmental sanitation nature could be accelerated if additional county personnel were available and if proper technical direction from the state level could be given. Although sufficient services were not given, a great deal was accomplished. This is shown by the fact that 16,780 sanitation units were installed, one training school was conducted, the septic tank and disposal field research project was continued, and swimming pool plans and specifications were reviewed and approved. The operation of swimming pools was also supervised.

There probably is no other single factor that affects the general health of a community as does its water supply. Through the efforts of State Health Department engineers engaged in this activity and the field cooperation of those engaged in the production of water for domestic use, each town and city with water supply may feel reasonably sure that all water delivered to the consumer's tap is safe to drink. Each of the 264 water supply plants was visited at least once. Plans and specifications covering proposed water works or additions were reviewed. Work under construction and work completed during 1949 represented a total monetary value of \$4,397,000. Conferences with consulting engineers and owners of public water supplies were held both in the office and in the field. Water and sewage works operator schools were conducted.

The Department has recognized the importance of the control of malaria for many years, and the program designed to control malaria, particularly around man-made bodies of water, has been one of its major sanitation activities.

A great deal of time and effort was spent during the year on minor and major impoundages. An agreement with the Conservation Department, whereby no fish are granted to the owner until a permit to impound is secured from the Health Department, has done much toward simplifying the work of curbing malaria. The efforts directed toward changing from the conventional larvicides to DDT larvicides have paid dividends on major impoundages. Although malaria incidence has decreased phenomenally, authorities agree that controls should not be relaxed at the present time.

Since the availability of DDT, cooperative residual house spraying programs have been carried on with the U.S. Public Health Service and local governing bodies. During the past season 13 counties and 42 towns and cities in the State participated in the spraying programs.

As in practically all other fields of public health, the demand for higher quality milk, meat and other food products cannot be ignored. The securing of proper improvements in eating estab-

lishments and hotels is the Health Department's responsibility and requires regular inspection and supervision. In cooperation with County Health Departments, all aid possible, within the limits of available personnel, was given to the inspection and certification of seafoods, production and processing of milk and milk products, inspection of food establishments and hotels, and the design, construction and operation of abattoirs.

The first phase of the work of the Water Improvement Advisory Commission was finished: namely, the study of streams in the State with respect to their sanitary condition. The report of the factual findings has been completed, and publication will follow soon. Additional studies have been begun, including the analyses of shellfish waters and shellfish stock. The 1949 Legislature amended the Act creating the Water Improvement Advisory Commission to broaden its scope and powers, which was necessary if the Commission is to perform its functions properly.

The records of the typhus cases reported indicate a steady decline of this disease. The control of typhus involves many activities, including advisory and supervisory service in rat proofing, rat stoppage, rat extermination, DDT dusting, working with commercial exterminators, and collection and examination of entomological data. In the typhus areas approximately 100,000 premises were inspected and treated. DDT, ro-dine poison bait, arsenic water and hydrocyanic gas were used. Extermination programs were carried on in 35 counties and 88 towns and cities. The typhus control program has been well worth the effort, as shown by the reduction in the number of reported typhus cases and positive rats, and, also, in the reduction of the rat and rat flea.

The services of the Drafting Section are available to all Bureaus and Divisions of the State Health Department, and this service is used quite freely. The number of new programs undertaken by all Bureaus, the desire for usual educational materials, and the need for charts and diagrams for talks and papers has increased the load of this Section.

The past year has seen steady progress made in all forms of environmental sanitation. The services rendered may not have been equal to the need, but it is truly felt that through the work done by the concerted efforts of all engaged in this field the people of our State were greatly benefited.

VITAL STATISTICS

During only two years of the past thirty-eight has the general mortality rate been lower than it was for 1949. The birth rate was the fourth highest on record. The number of marriages and divorces has continued to decrease. Infective and parasitic diseases are becoming of less importance as killers as a result of the progress which is being made in the detection, treatment and prevention of most communicable diseases.

During the year the Bureau of Vital Statistics handled nearly 135,000 pieces of mail pertaining

to records and statistics. A total of \$23,300 in statutory fees was received. This sum represents 46,600 certified records, not including 15,825 issued for use by the Veterans Administration. In addition to the certified copies issued, 32,450 requests for searches and non-certified information were handled for social security, welfare and miscellaneous purposes. The records' service demand appears to have become stable at a high level since the end of the War.

A total of 131,534 original records was filed in the central Bureau of Vital Statistics. In addition 8,441 transcripts of divorce decrees and 38,328 reports of premarital physical examinations and blood tests were recorded. Certificates were prepared and filed for 824 adoptions, 394 legitimations and 8,760 delayed records of birth.

The several cooperative projects with the U.S. Public Health Service were continued. Periodic reports of natality and mortality experience were published. New birth, death and stillbirth certificate forms were introduced and a revised Statistical Classification of Diseases, Injuries and Causes of Death was adopted. These activities are a part of a nationwide effort to attain uniformity and comparability in public health statistics.

Preparations have been made for a special test in completeness of birth registration. This test is a joint project with the U.S. Public Health Service and the Bureau of the Census in connection with the 1950 census of population. Statistical services were rendered in about the same scope and content as usual. This activity is handicapped by lack of statistically trained personnel. A compilation of annual vital statistics was published in 1949 for the first time since 1940.

The Records Division processed 6,960 correction affidavits. This means that approximately one-ninth of all records from which certified copies were made had to be corrected. As a means of correcting obvious errors and omissions in current death records, 3,906 queries were mailed out in 1949. Of these, satisfactory replies were received in 3,082 instances, thus enabling the nosologists to make more accurate classifications of cause of death. Special queries totaling 846 were made on deaths caused by accidents. This supplementary information is compiled as a contribution to accident-prevention programs. The smaller number of queries sent out during 1949, the response to them, and the decreased number of deaths falling in the ill-defined and unknown category of mortality statistics give evidence of improved cause-of-death reporting and responsiveness from physicians.

Continued efforts are being made to improve registration throughout the State. The birth registration test which will be made in 1950 will measure any progress made in this direction since the 1940 test, which showed that 15 of each 100 births were not registered. A further reduction was made in the number of local registrars. Three additional counties changed to the single registrar plan, making a total of thirty-one counties using this system. Several others have consolidated and placed additional areas under fewer

but more competent and energetic local registrars.

TRENDS IN VITAL STATISTICS

Deaths

Users of vital statistics are reminded that the tabulated mortalities by cause in this report and subsequent reports will be according to the Sixth Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death. Changed rules of classification produce some mortality statistics which are incomparable in various degrees with those compiled in prior years under the old coding procedure. Malignant neoplasms (cancer) now includes leukemias, although this change is a minor one. The following causes of death are greatly changed under the revised classifications: nephritis no longer includes certain diseases associated with vascular lesions, diseases of the heart and diseases of the circulatory system; food poisoning has been established as a separate item and is no longer included in the accident group; diabetes, prematurity and cerebral hemorrhage mortality statistics have been affected by revised definitions and inclusions.

There were 26,350 deaths in 1949, with a rate of 8.5 per 1,000 population, as compared with 8.6 in 1948 and a five-year average (1944-1948) rate of 8.5. It appears then that the general mortality experience of 1949 changed very little from the previous year. Even though infant and maternal mortalities and tuberculosis deaths are being continuously reduced, our aging population is experiencing an increasing number of deaths, as the heart and cancer mortality statistics show. However, there is nothing to indicate an increase in the rate of mortality at a specific age.

Infant Deaths

There were 3,282 deaths of infants under one year of age, including 2,237 infants who died during the first month after birth. The infant death rate of 39.4 per 1,000 live births is the highest since 1945 but is well below the five-year average of 40.2. A great saving of lives has been made during the past several years among babies under one month old, as witnessed by a drop in the neonatal mortality rate from 36.7 deaths per 1,000 live births in 1940 to 26.9 in 1949.

However, very little of this progress is shown by mortality rates of the past five years. Immaturity at birth continues to be the chief cause of neonatal deaths and ranked seventh as a chief cause of all deaths.

There is evidence that whooping cough immunization is yielding good results. Only 23 infant deaths from this cause were recorded in 1949 as compared with 61 in 1948 and a five-year average of 78 such deaths. Gastro-intestinal diseases claimed the lives of 228 children under two years old in 1949, more than a 58 per cent increase over 1948.

Stillbirths

The ratio of stillbirths to all births increased slightly in 1949, but remains below the five-year average rate of 28 per 1,000 births. Alabama laws require registration of all fetal deaths where uterogestation has advanced through the fifth month. Stillbirth statistics are faulty because of incomplete reporting.

Maternal Deaths

Diseases of pregnancy and childbirth caused 158 deaths at a rate of 18.5 per 10,000 total births. The 1949 rate is nearly 15 per cent below the 1948 maternal mortality rate and is the lowest in Alabama's vital statistics history. A rapid reduction in the number of deaths from puerperal causes has been made during recent years.

Principal Causes of Death

The ten chief causes of mortality in 1949 accounted for over 72 per cent of all deaths in the State. Heart disease as a cause of death increased over 18 per cent above the 1948 figure, and shows by far the highest mortality rate on record for this disease. Also increasing are cerebral hemorrhage (intracranial lesions of vascular origin) and cancer (malignant neoplasms). Interpretations of mortality rates of the so-called degenerative diseases should take into account that these causes of death are operating in an ever-increasing population of potential victims. As a result of deferred mortality our population is aging at a rate which has not been balanced by the high birth rate in recent years. Among the chief causes of death which show decreases are accidents, pneumonia and tuberculosis. Accident

The Ten Major Causes of Death,
1949, With Rates Per 100,000 Population

	1949		1948		Average 1944-1948	
	Provisional Number	Rate	Final Number	Rate	Number	Rate
Diseases of heart	7,703	248.4	6,446	210.1	5,611	186.9
Vascular lesions of central nervous system	2,913	93.9	2,687	87.6	2,499	83.2
Malignant neoplasms	2,791	90.0	2,725	88.8	2,435	81.1
Accidental deaths	1,670	53.8	1,912	62.3	1,883	62.7
Pneumonia, all forms	952	30.7	1,190	38.8	1,224	40.8
Tuberculosis, all forms	907	29.2	1,011	33.0	1,130	37.6
Nephritis and nephrosis	764	24.6	2,018	65.8	2,038	67.9
Immaturity	750	9.0	1,054	12.4	976	12.3
Homicide	417	13.4	468	15.3	407	13.6
Diseases of the arteries	346	11.2	247	8.0	270	9.0

fatalities in 1949 were less numerous than for any year since 1933 and the rate of 53.9 per 100,000 population is the lowest on record. The pneumonia death rate dropped substantially to the lowest rate (30.7) on record. Another of the major killers, tuberculosis, has decreased in importance with a death rate of 29.2 for the year. The tuberculosis death rate has decreased nearly two-thirds during the past twenty years.

Deaths From Certain Communicable Diseases,
1949, With Rates Per 100,000 Population

	1949		1948		Average 1944-1948	
	Number	Rate	Number	Rate	Number	Rate
Syphilis	205	6.6	294	9.6	346	11.5
Influenza	211	6.8	246	8.0	401	13.4
Whooping cough.....	33	0.7	61	2.0	78	2.6
Diphtheria	21	0.7	37	1.2	44	1.5
Meningococcal infections.....	17	0.5	29	0.9	46	1.5
Polioomyelitis	14	0.4	18	0.6	16	0.5
Malaria	18	0.6	15	0.5	28	0.9
Measles	53	1.7	14	0.5	36	1.2
Typhus fever.....	3	0.1	14	0.5	28	0.9
Typhoid and paratyphoid	1	*	6	0.2	11	0.4
Encephalitis	1	*	5	0.2	12	0.4
Scarlet fever.....	-	-	3	0.1	2	0.1

*Rate less than one-half of 1 per cent.

The syphilis mortality rate is significantly low. Whooping cough deaths dropped over 60 per cent from 61 deaths in 1948 to 23 in 1949. These reductions reflect successful preventive campaigns and educational programs.

Births

The 1949 birth rate of 26.8 per 1,000 population is the fourth highest ever recorded in Alabama. A total of 83,222 births was recorded, as compared with 84,994 in 1948 and 87,242 in 1947, when the highest rate (28.8) was established. The third highest rate (27.1) was established in 1943. The period of high birth rates has continued longer than was expected by population experts. High-level employment and general prosperity have given an additional stimulus to childbearing well beyond the period of demobilization of the armed forces, which was expected to be characterized by more marriages and births.

Marriages and Divorces

The number of marriages and divorces has continued to drop. Only 19,346 Alabama marriages were recorded last year, as compared with 20,926 in 1948. Such a rapid drop since 1946, when an all-time record of 56,333 marriages was established, may be in part due to Alabama's antenuptial blood test law, which became effective in 1948. There is evidence of an increasing number of out-of-state marriages of Alabama residents. Mississippi has no premarital examination requirement. National statistics on marriages show that Alabama's marriage rate decreased more than 55 per cent between 1947 and 1949. For the same period the national decrease was about 10 per cent. Mississippi and Georgia marriage rates

Communicable Diseases

Provisional statistics show that mortalities attributed to measles increased substantially to a total of 53, as compared with 14 deaths from this cause in 1948. The other observed communicable disease mortality rates decreased with the exception of malaria which increased slightly. Not a single death was reported as due to scarlet fever.

dropped less than one per cent. Georgia has recently enacted a premarital examination law.

Part III of the Board's report was approved, as was the report as a whole.

REVISION OF THE ROLLS

The next order of business being the revision of the Rolls of the Association, the Secretary was directed by President Wilson to proceed without interruption in the absence of objection. As a preface to the revision of the Roll of County Societies, the Secretary said:

"County Medical Societies, to comply with the Constitution, must meet certain obligations. First, an annual report, on forms furnished by the Association, must be filed with the Secretary; second, each society is expected to be represented at the annual meeting by at least one delegate; and, third, dues are to be remitted for each member not exempt from payment of dues."

With this foreword, the revision proceeded.

1. Revision of the Roll of County Societies:

(a) County societies which have fulfilled all their constitutional obligations: Autauga, Baldwin, Bibb, Blount, Bullock, Butler, Calhoun, Chilton, Clay, Coffee, Colbert, Coosa, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Fayette, Franklin, Geneva, Hale, Henry, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Lowndes, Macon, Marion, Marshall, Mobile, Monroe, Montgomery, Morgan,

Perry, Pickens, Pike, Randolph, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Wilcox, Winston—Total 51.

(b) County societies partially delinquent: In that they are not represented by delegates at this meeting of the Association: Barbour, Chambers, Cherokee, Choctaw, Clarke, Conecuh, Greene, Lamar, Limestone, Madison, Marengo, Russell, St. Clair, Washington. In that the society is not represented at this meeting and dues have not been received: Cleburne. In that report and dues have not been received: Etowah—Total 16.

(c) County societies totally delinquent: None.

No objection being made as to the correctness of this report, the President directed the Secretary to write the Society delinquent in report and dues and, failing to remove the delinquencies, to call the Society to the attention of the State Board of Censors.

Whereupon the roll of County Medical Societies was declared closed until the next annual session of the Association.

The Secretary then said:

"In revising the Roll of Counsellors, five lists are prepared, designated respectively: (1) the schedule of counsellors clear on the books; (2) the schedule of delinquent counsellors—counsellors delinquent in attendance or dues, or against whom charges may be pending; (3) the schedule of miscellaneous counsellors—counsellors who have died since the last annual meeting, or have offered their resignation, or have moved out of the state, or out of their respective congressional districts; (4) the schedule of active counsellors of twenty years' standing; and (5) the schedule of counsellors-elect who have qualified as provided in the Constitution."

With such preface, the revision of the rolls was continued.

2. Revision of the Roll of Counsellors:

(a) Counsellors clear on the books: Abbott, Acker, Alison, Allgood, Anderson, Barber, Bell, Belue, Boyd, Bragg, Branch, Brown, Brunson, Carraway, Carter, Chenault, Cloud, Clyde, Cocke, Collier, Conwell, Craddock, Darby, Daves, Davis, Denison, Dodson, Donald, D. C., and J. M., Eskew, Finney, Ford, Foshee, Garber, Gibson, Gill, Gipson, Givhan, Godard, Golden, Gresham, Grote, Harper, Hill, R. C. Hill, R. Lee, Hodges, Howell, Isbell, Jackson, Jones, C. T., Jones, J. Paul, Kennedy, Killingsworth, Leatherwood, Lisenby, Littlejohn, Martin, Mazyck, McCown, McNease, Meadows, Moore, C. W. C., Morgan, J. O., Morgan, J. Ralph, Neal, Owings, Parker, L. D., Parker, Robert, Partlow, Perdue, Riggs, Riser, Roan, Robinson, Salter, P. P., Salter, W. M., Samford, Segrest, Sewell, Sherrill, Simpson, H. M., Simpson, John W., Skinner, Smith, Stabler, Stallworth, Thacker, Tillman, Waters, Watson, Weldon, White, Whiteside, Wilson, Woodruff.

In the absence of objection, the President ordered passed the names of these Counsellors reported as clear on the books.

(b) Delinquent Counsellors: None.

(c) Miscellaneous Counsellors:

(1) Life Counsellors who have died: Drs. W. M. Faulk, C. A. Mohr, and Lloyd Noland.

(2) Active Counsellors who have died: Dr. B. C. Scarbrough.

(3) Active Counsellors who have moved: None.

(4) Active Counsellors who have resigned: None.

(d) Active Counsellors of twenty years' standing: None.

(e) Counsellors-Elect who have properly qualified: Drs. Jacques H. Baumhauer, J. Mac Barnes, James C. Gladney and S. Sellers Underwood.

The President directed that the names of the deceased counsellors be transferred to the Book of the Dead; and that to the Roll of Active Counsellors there be added Drs. J. H. Baumhauer, J. M. Barnes, J. C. Gladney and Sellers Underwood.

Whereupon the President declared the Roll of the College of Counsellors closed until the next annual session of the Association.

3. Revision of the Roll of Correspondents:

Dr. Paul D. White, the 1950 Jerome Cochran Lecturer, was added to the Roll of Correspondents.

4. Revision of the Roll of Officers:

Dr. J. M. Weldon, Mobile was elected President; Dr. J. O. Finney, Gadsden, Vice-President of the Northeastern Division; Dr. A. J. Treherne, Atmore, Vice-President of the Southwestern Division for 3 years to complete the unexpired term of Dr. W. R. Carter, resigned; Dr. Douglas L. Cannon, Secretary-Treasurer; and Drs. E. V. Caldwell and J. O. Morgan to succeed themselves as Censors.

Committees constitutionally provided to nominate Counsellors brought in the following nominations, and the nominees were elected by the Association: 1st District—J. Mac Bell and J. Paul Jones; 2nd—J. O. Lisenby and Frank W. Riggs; 3rd—E. T. Brunson; 5th—J. M. Crawford; 6th—R. C. Partlow, R. C. Hill and A. F. Wilkerson; 9th—G. A. Denison, Hughes Kennedy, J. A. Meadows and J. R. Morgan.

Miscellaneous Business

MOTION BY DR. HARPER

In view of the numerous companies in Alabama offering prepaid voluntary health insurance, the failure of Blue Cross to cover a greater number of people, and the

amount of benefits available, Dr. W. F. Harper of Selma moved that the President appoint a committee to study present set-ups with the prospect of developing some type of uniform contract, or any other improvement, and report its recommendations at the next meeting of the Association. *The motion prevailed.*

EXPRESSION OF THANKS

On motion by Dr. Cannon the gratitude of the Association was expressed to all individuals and agencies that had contributed to the success of the 1950 session. The host Society was thanked in particular for its hospitality.

MEETING OF 1951

Invitation was accepted to meet in Mobile, April 19-21.

INSTALLATION OF OFFICERS

The newly-elected officers were escorted to the platform, and Dr. Weldon, on receiving the gavel from Dr. Wilson, expressed appreciation of the honor conferred on him. Vice-President Treherne also acknowledged the honor he had received; whereupon the Association was declared adjourned.

THE ROLL OF COUNSELLORS

REVISION OF 1950

LIFE COUNSELLORS

Name and Address	Date of Election
Acker, Paul Jerome Morris, Mobile (1)	1923
Alison, Samuel Blakemore, Minter (4)	1919
Ashcraft, Virgil Lee, Reform (7)	1919
Bedsole, James G., Jackson (1)	1922
Bondurant, Eugene DuBose, Mobile (1)	1894
Burdeshaw, Shelby L., Headland (3)	1921
Caldwell, Edwin Valdivia, Huntsville (8)	1918
Cannon, Douglas L., Montgomery (2)	1928
Chenault, Frank L., Decatur (8)	1917
Dabney, Marye Y., Birmingham (9)	1923
Granger, Frank G., Ashford (3)	1928
Gresham, George L., Speigner (4)	1913
Guice, Charles Lee, Gadsden (5)	1899
Harris, Seale, Birmingham (9)	1903
Harrison, William Groce, Birmingham (9)	1896
Hayes, Charles Philips, Elba (3)	1920
Hayes, Julius Pope, Clanton (6)	1920
Heacock, Jos. D., Birmingham (9)	1912
Heflin, Wyatt, Birmingham (9)	1893
Hill, Robert L., Winfield (7)	1924
Hill, Robert Somerville, Montgomery (2)	1898
Howell, William Edward, Haleyville (7)	1918
Howle, James Augustus, Hartselle (8)	1895
Hubbard, T. Brannon, Montgomery (2)	1924
Jackson, Alva A., Florence (8)	1918
Leach, Sydney, Tuscaloosa (6)	1920
Lester, Belford S., Birmingham (9)	1923
Lightfoot, Phillip Malcolm, Shorter (3)	1918
Lull, Cabot, Birmingham (9)	1919
Martin, James Cordie, Cullman (7)	1917

Mason, James Monroe, Birmingham (9)	1918
McAdory, Edward Dudley, Cullman (7)	1920
McCain, William Jasper, Livingston (6)	1898
McCall, Daniel T., Mobile (1)	1923
McLeod, John Calvin, Bay Minette (2)	1911
McLester, James Somerville, Birmingham (9)	1913
Oswalt, G. G., Mobile (1)	1929
Partlow, William Dempsey, Tuscaloosa (6)	1909
Ralls, Arthur W., Gadsden (5)	1919
Rucker, Edmon W., Birmingham (9)	1922
Sankey, Howard J., Birmingham (9)	1914
Scott, Walter F., Birmingham (9)	1922
Searcy, Harvey Brown, Tuscaloosa (6)	1923
Sledge, Edward S., Mobile (1)	1922
Speir, Phillip V., Greenville (2)	1917
Taylor, Woodie R., Town Creek (8)	1928
Thigpen, Charles Alston, Montgomery (2)	1900
Thomas, Eugene Marvin, Prattville (4)	1920
Walker, Alfred A., Birmingham (9)	1923
Walls, J. J., Alexander City (5)	1924
Wilkinson, David Leonidas, Birmingham (9)	1902
Total 51	

ACTIVE COUNSELLORS

Those marked with a † are serving last terms of six years.
Those marked with an asterisk (*) are serving second terms of seven years.
Those without a symbol are serving first terms of seven years.
The numeral is the number of the congressional district.

	Date of Elec- Expi- tion ration
Abbott, Chas. E., Tuscaloosa (6)	*1945 to 1952
Acker, Charles T., Montevallo (6)	*1944 to 1951
Alison, James F., Selma (4)	†1948 to 1954
Allgood, Homer W., Fairfield (9)	1944 to 1951
Anderson, Thos. J., Greensboro (6)	†1947 to 1953
Barber, William J., Butler (1)	*1949 to 1956
Bell, J. Mac, Mobile (1)	*1950 to 1957
Belue, Julius O., Athens (8)	*1944 to 1951
Boyd, Frank H., Opelika (3)	*1946 to 1953
Bragg, John C., Decatur (8)	*1948 to 1955
Branch, John L., Montgomery (2)	1944 to 1951
Brown, Elridge T., Cleveland (7)	*1944 to 1951
Brunson, Emmett T., Samson (3)	†1950 to 1956
Carraway, Chas. Newton, Birmingham (9)	*1949 to 1956
Carter, William R., Repton (2)	†1948 to 1954
Chenault, Erskine M., Decatur (8)	†1949 to 1955
Cloud, Robert E., Ensley (9)	*1948 to 1955
Clyde, Wallace A., Birmingham (9)	1947 to 1954
Cocke, William T., Demopolis (1)	*1946 to 1953
Collier, James P., Tuscaloosa (6)	*1947 to 1954
Conwell, H. Earle, Birmingham (9)	*1949 to 1956
Craddock, French H., Sylacauga (4)	†1946 to 1952
Darby, Henry A., Athens (8)	1947 to 1954
Daves, James G., Cullman (7)	*1945 to 1952
Davis, Lewis C., Gordo (7)	*1946 to 1953
Denison, George A., Birmingham (9)	*1950 to 1957
Dodson, Robert B., Cullman (7)	1944 to 1951
Donald, Dan C., Birmingham (9)	1944 to 1951
Donald, Joseph M., Birmingham (9)	1946 to 1953
Eskew, M. H., Uniontown (6)	†1948 to 1954
Finney, James O., Gadsden (5)	1947 to 1954
Ford, Charles E., Roanoke (5)	*1946 to 1953
Foshee, Reuben A., Alexander City, Rt. 5 (5)	1944 to 1951
Garber, James R., Birmingham (9)	†1946 to 1952
Gibson, Edward Lee, Enterprise (3)	*1947 to 1954
Gill, Daniel G., Montgomery (2)	1947 to 1954
Gipson, Amos C., Gadsden (5)	1944 to 1951
Givhan, Edgar G., Jr., Birmingham (9)	1946 to 1953
Godard, Claud G., Fairhope (2)	*1949 to 1956

Golden, William C., Clanton (6)	1944 to 1951
Gresham, Walter A., Russellville (7)	*1947 to 1953
Grote, Carl A., Huntsville (8)	*1944 to 1951
Harper, William F., Selma (4)	1948 to 1955
Hill, Robert C., York (6)	*1950 to 1956
Hill, R. Lee, Haleyville (7)	*1946 to 1953
Hodges, Rayford, Scottsboro (8)	*1949 to 1955
Howell, John V., Marion (6)	*1943 to 1950
Isbell, Arthur L., Albertville (5)	*1947 to 1954
Jackson, Albert C., Jasper (7)	*1947 to 1954
Jones, Carl T., Newville (3)	*1948 to 1955
Jones, J. Paul, Camden (1)	*1950 to 1957
Kennedy, Hughes, Jr., Birmingham (9)	*1950 to 1957
Killingsworth, Noah W., Brundidge (2)	*1946 to 1953
Leatherwood, Elbert F., Hayneville (2)	1944 to 1951
Lisenby, J. Otis, Atmore (2)	*1950 to 1957
Littlejohn, Willmot S., Birmingham (9)	1948 to 1955
Martin, John A., Montgomery (2)	*1947 to 1953
Mazyck, Arthur, Dothan (3)	1948 to 1955
McCown, William G., Huntsville (8)	1947 to 1954
McNease, Benjamin W., Fayette (7)	1947 to 1954
Meadows, James A., Birmingham (9)	*1950 to 1957
Moore, C. W. C., Talladega (4)	*1944 to 1951
Morgan, J. Orville, Gadsden (5)	*1946 to 1953
Morgan, J. Ralph, Birmingham (9)	*1950 to 1957
Neal, Ralph D., Grove Hill (1)	1948 to 1955
Owings, W. J. B., Brent (6)	*1948 to 1955
Parker, Lorenzo D., Andalusia (2)	*1947 to 1953
Parker, Robert, Montgomery (2)	1948 to 1955
Partlow, Rufus C., Tuscaloosa (6)	*1950 to 1957
Perdue, James D., Mobile (1)	*1947 to 1953
Riggs, Frank W., Montgomery (2)	*1950 to 1957
Riser, William H., Lafayette (5)	*1949 to 1955
Roan, Avery M., Decatur (8)	*1948 to 1955
Robinson, E. Bryce, Birmingham (9)	1948 to 1955
Salter, Paul P., Eufaula (3)	1948 to 1955
Salter, Wilbur M., Anniston (4)	*1948 to 1954
Samford, Millard W., Opelika (3)	1946 to 1953
Segrest, Grady O., Mobile (1)	*1949 to 1956
Sewell, John Ferris, Wetumpka (4)	*1947 to 1954
Sherrill, John D., Birmingham (9)	*1946 to 1953
Simpson, Harry M., Florence (8)	*1945 to 1952
Simpson, John W., Birmingham (9)	*1949 to 1956
Skinner, Marcus, Selma (4)	*1946 to 1953
Smith, Gordon R., Ozark (3)	*1948 to 1954
Stabler, Lorenzo V., Greenville (2)	*1944 to 1951
Stallworth, William A., Frisco City (1)	*1944 to 1951
Thacker, Vincent J., Dothan (3)	*1949 to 1955
Tillman, John S., Clio (3)†	*1949 to 1955
Waters, Hinton W., Opp (2)	*1946 to 1953
Watson, Jerre, Anniston (4)	*1945 to 1952
Weldon, Joseph M., Mobile (1)	*1949 to 1955
White, Marvin S., Hamilton (7)	1946 to 1953
Whiteside, Maurice S., Cullman (7)	*1948 to 1955
Wilson, Frank C., Birmingham (9)	*1949 to 1955
Woodruff, Gerald G., Anniston (4)	*1947 to 1954
Total 98	

COUNSELLORS-ELECT

Crawford, Jas. M., Arab (5)	1950-1957
Wilkerson, Arthur F., Marion (6)	1950-1957

THE ROLL OF THE COLLEGE OF COUNSELLORS BY CONGRESSIONAL DISTRICTS

On this roll the names of the Counsellors are given by Congressional Districts. It is intended to serve as a guide in the election of new Counsellors, with a view to the distribution of them in approximate proportion to the number of members in the several districts. It is not considered to be good policy, and it is not considered to be fair and right, to give a few large towns greatly more than their pro rata share of Counsellors. The calculations are based on the nearest whole

number. On April 1, 1950, there were 1758 members in the County Medical Societies. That would give one Counsellor to every 18 members. The membership set forth in the following is that of April 1.

FIRST DISTRICT

Names of Counsellors—W. T. Cocke, Marengo; W. J. Barber, Choctaw; R. D. Neal, Clarke; J. H. Baumhauer, G. O. Segrest, J. M. Weldon, J. D. Perdue and J. Mac Bell, Mobile; W. A. Stallworth, Monroe; J. Paul Jones, Wilcox.

County	Members	Counsellors
Choctaw	7	1
Clarke	14	1
Marengo	11	1
Mobile	161	5
Monroe	9	1
Washington	2	0
Wilcox	8	1
	212	10

SECOND DISTRICT

Names of Counsellors—C. G. Godard, Baldwin; L. V. Stabler, Butler; W. R. Carter, Conecuh; L. D. Parker and H. W. Waters, Covington; J. O. Lisenby, Escambia; E. F. Leatherwood, Lowndes; J. L. Branch, F. W. Riggs, J. A. Martin, J. M. Barnes, Robert Parker and D. G. Gill, Montgomery; and N. W. Killingsworth, Pike.

County	Members	Counsellors
Baldwin	21	1
Butler	11	1
Conecuh	10	1
Covington	21	2
Crenshaw	9	0
Escambia	13	1
Lowndes	3	1
Montgomery	126	6
Pike	17	1
	231	14

THIRD DISTRICT

Names of Counsellors—J. S. Tillman† and P. P. Salter, Barbour; E. L. Gibson, Coffee; G. R. Smith, Dale; E. T. Brunson, Geneva; C. T. Jones, Henry; V. J. Thacker and Arthur Mazyck, Houston; F. H. Boyd and M. W. Samford, Lee.

County	Members	Counsellors
Barbour	13	2
Bullock	4	0
Coffee	13	1
Dale	8	1
Geneva	11	1
Henry	8	1
Houston	28	2
Lee	19	2
Macon	6	0
Russell	6	0
	116	10

FOURTH DISTRICT

Names of Counsellors—W. M. Salter, Jerre Watson and G. G. Woodruff, Calhoun; J. F. Ali-

†Deceased.

son, W. F. Harper and Marcus Skinner, Dallas; J. F. Sewell, Elmore; and French Craddock and C. W. C. Moore, Talladega.

County	Members	Counsellors
Autauga	6	0
Calhoun	39	3
Clay	6	0
Coosa	3	0
Dallas	41	3
Elmore	11	1
St. Clair	12	0
Talladega	26	2
	144	9

FIFTH DISTRICT

Names of Counsellors—W. H. Riser, Chambers; A. C. Gipson, J. O. Finney and J. O. Morgan, Etowah; A. L. Isbell and J. M. Crawford, Marshall; C. E. Ford, Randolph; and R. A. Foshee, Tallapoosa.

County	Members	Counsellors
Chambers	15	1
Cherokee	3	0
Cleburne	3	0
DeKalb	14	0
Etowah	65	3
Marshall	22	2
Randolph	9	1
Tallapoosa	14	1
	145	8

SIXTH DISTRICT

Names of Counsellors—W. J. B. Owings, Bibb; W. C. Golden, Chilton; T. J. Anderson, Hale; M. H. Eskew and A. F. Wilkerson, Perry; C. T. Ack-er, Shelby; R. C. Hill, Sumter; and J. P. Collier, R. C. Partlow and C. E. Abbott, Tuscaloosa.

County	Members	Counsellors
Bibb	11	1
Chilton	13	1
Greene	5	0
Hale	6	1
Perry	9	2
Shelby	15	1
Sumter	14	1
Tuscaloosa	60	3
	133	10

SEVENTH DISTRICT

Names of Counsellors—E. T. Brown, Blount; R. B. Dodson, J. G. Daves and M. S. Whiteside, Cullman; B. W. McNease, Fayette; W. A. Gresham, Franklin; M. S. White, Marion; L. C. Davis, Pickens; A. C. Jackson and J. C. Gladney, Walker; and R. Lee Hill, Winston.

County	Members	Counsellors
Blount	12	1
Cullman	21	3
Fayette	8	1
Franklin	14	1
Lamar	11	0
Marion	10	1
Pickens	9	1

Walker	30	2
Winston	10	1
	123	11

EIGHTH DISTRICT

Names of Counsellors—Rayford Hodges, Jackson; H. M. Simpson, Lauderdale; H. A. Darby and J. O. Belue, Limestone; W. G. McCown and C. A. Grote, Madison; and E. M. Chenault, J. C. Bragg and A. M. Roan, Morgan.

County	Members	Counsellors
Colbert	21	0
Jackson	12	1
Lauderdale	29	1
Lawrence	7	0
Limestone	12	2
Madison	37	2
Morgan	31	3
	149	9

NINTH DISTRICT

Names of Counsellors—J. D. Sherrill, J. R. Garber, R. E. Cloud, C. N. Carraway, H. Earle Conwell, J. W. Simpson, F. C. Wilson, G. A. Deni-son, Hughes Kennedy, Jr., J. A. Meadows, Ralph Morgan, D. C. Donald, Joe M. Donald, E. G. Giv-han, Jr., H. W. Allgood, W. A. Clyde, E. Bryce Robinson, W. S. Littlejohn, and S. S. Underwood.

County	Members	Counsellors
Jefferson	500	19

THE ROLL OF CORRESPONDENTS

"Distinguished members of the medical profes-sion residing outside of the State, and Counsel-lors of the Association, who after not less than ten years of faithful service may have resigned their counsellorships, shall be eligible for election as Correspondents.

"Correspondents shall have the privilege of transmitting or presenting to the Association such communications, or scientific essays, as they may deem proper."—*From the Constitution.*

Name and Address	Date of Election
Andrew J. Coley, Oklahoma City	1909
W. S. Thayer, Baltimore	1921
Lewellys F. Barker, Baltimore	1921
Rudolph Matas, New Orleans	1921
John B. Elliott, Jr., New Orleans	1921
Henry A. Christian, Boston	1921
H. A. Royster, Raleigh, N. C.	1926
Stewart Robers, Atlanta	1927
G. Canby Robinson, Baltimore	1928
Louis B. Wilson, Rochester, Minn.	1930
A. Benson Cannon, New York	1932
J. Shelton Horsley, Richmond	1933
Russell L. Cecil, New York	1934
George H. Semken, New York	1935
Frank H. Lahey, Boston	1937
T. M. McMillan, Philadelphia	1938
George T. Pack, New York	1939
E. V. McCollum, Baltimore	1940
Harvey B. Stone, Baltimore	1942
Albert C. Furstenberg, Ann Arbor	1943

Tinsley R. Harrison, Dallas, Texas	1944
Alton Ochsner, New Orleans	1946
Reginald Fitz, Boston	1947
Andrew C. Ivy, Chicago	1948
Max Thorek, Chicago	1949
Paul D. White, Boston	1950

SCHEDULE OF THE ANNUAL SESSIONS
AND PRESIDENTS SINCE THE RE-
ORGANIZATION IN 1868

<i>Place and President</i>	<i>Year</i>
Selma—Albert Galatin Mabry	1868
Mobile—Albert Galatin Mabry	1869
Montgomery—Richard Frazer Michel	1870
Mobile—Francis Armstrong Ross	1871
Huntsville—Thomas Childress Osborne	1872
Tuscaloosa—George Ernest Kumpe	1873
Selma—George Augustus Ketchum	1874
Montgomery—Job Sobieski Weatherly	1875
Mobile—John Jefferson Dement	1876
Birmingham—Edward Davies McDaniel	1877
Eufaula—Peter Bryce	1878
Selma—Robert Dickens Webb	1879
Huntsville—Edmond Pendleton Gaines	1880
Montgomery—William Henry Anderson	1881
Mobile—John Brown Gaston	1882
Birmingham—Clifford Daniel Parke	1883
Selma—Mortimer Harvey Jordan	1884
Greenville—Benjamin Hogan Riggs	1885
Anniston—Francis Marion Peterson	1886
Tuscaloosa—Samuel Dibble Seelye	1887
Montgomery—Edward Henry Sholl	1888
Mobile—Milton Columbus Baldrige	1889
Birmingham—Charles Higgs Franklin	1890
Huntsville—William Henry Sanders	1891
Montgomery—Benjamin James Baldwin	1892
Selma—James Thomas Searcy	1893
Birmingham—Thaddeus Lindley Robertson	1894
Mobile—Richard Matthew Fletcher	1895
Montgomery—William Henry Johnston	1896
Selma—Barckley Wallace Toole	1897
Birmingham—Luther Leonidas Hill	1898
Mobile—Henry Altamont Moody	1899
Montgomery—John Clarke LeGrande	1900
Selma—Russell McWhorter Cuninghame	1901
Birmingham—Edwin Lesley Marechal	1902
Talladega—Glenn Andrews	1903
Mobile—Matthew Bunyan Cameron	1904
Montgomery—Capers Capehart Jones	1905
Birmingham—Eugene DuBose Bondurant	1906
Mobile—George Tighlman McWhorter	1907
Montgomery—Samuel Wallace Welch	1908
Birmingham—Benjamin Leon Wyman	1909
Mobile—Wooten Moore Wilkerson	1910
Montgomery—Wyatt Heflin Blake	1911
Birmingham—Lewis Coleman Morris	1912
Mobile—Harry Tutwiler Inge	1913
Montgomery—Robert S. Hill	1914
Birmingham—Benjamin Britt Simms	1915
Mobile—James Norment Baker	1916
Montgomery—Henry Green	1917
Birmingham—William Dempsey Partlow	1918
Mobile—Isaac LaFayette Watkins	1919
Anniston—James Somerville McLester	1920
Montgomery—Louis William Johnston	1921

<i>Place and President</i>	<i>Year</i>
Birmingham—Dyer F. Talley	1922
Mobile—Walter S. Britt	1923
Montgomery—W. W. Harper	1924
Birmingham—J. D. Heacock	1925
Mobile—C. A. Mohr	1926
Montgomery—A. L. Harlan	1927
Birmingham—John D. S. Davis	1928
Mobile—E. V. Caldwell	1929
Montgomery—L. E. Broughton	1930
Birmingham—W. G. Harrison	1931
Mobile—Toulmin Gaines	1932
Montgomery—Samuel Kirkpatrick	1933
Birmingham—James R. Garber	1934
Mobile—William M. Cunningham	1935
Montgomery—Charles A. Thigpen	1936
Birmingham—Lloyd Noland	1937
Mobile—E. S. Sledge	1938
Montgomery—Seale Harris, Sr.	1939
Birmingham—M. S. Davie	1940
Mobile—Samuel A. Gordon	1941
Montgomery—James M. Mason	1942
Birmingham—Harvey B. Searcy	1943
Montgomery—Fred W. Wilkerson	1944
Meeting Cancelled—Walter F. Scott	1945
Birmingham—Walter F. Scott	1946
Birmingham—Carl A. Grote	1947
Mobile—Jesse P. Chapman	1948
Montgomery—J. Paul Jones	1949
Birmingham—Frank C. Wilson	1950

SECRETARIES OF THE ASSOCIATION

1852-1854	George A. Ketchum
1854-1855	R. Miller
1869-1873	Jerome Cochran
1874-1878	B. H. Riggs
1879-1892	T. A. Means
1893-1897	J. R. Jordan
1897-1904	G. P. Waller
1904-1906	L. C. Morris
1906-1915	J. N. Baker
1915-1923	H. G. Perry
1923-1924	Douglas L. Cannon
1924-1930	B. B. Simms
1930-1940	Douglas L. Cannon

TREASURERS OF THE ASSOCIATION

1854-1855	W. P. Reese
1869-1898	W. C. Jackson
1898-1915	H. G. Perry
1915-1939	J. U. Ray

SECRETARY-TREASURERS OF THE
ASSOCIATION

1940-	Douglas L. Cannon
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SCHEDULE OF JEROME COCHRAN
LECTURERS

1899—J. T. Searcy, Tuscaloosa—What Is In-
sanity?
1900—Wm. Osler, Baltimore—Not present.

- 1901—Wm. Osler, Baltimore—Not present.
 1902—Nathan Bozeman, New York—Declined.
 1903—George H. Price, Nashville—The History of Medicine.
 1904—W. S. Thayer, Baltimore—Cardiac and Vascular Complications of Typhoid Fever.
 1905—Robert Abbe, New York—The Problems of Surgery.
 1906—Joseph Collins, New York—Arteriosclerosis.
 1907—Nicholas Senn, Chicago—Final Triumph of Scientific Medicine.
 1908—E. L. Marechal, Mobile—Absent.
 1909—Lewellys F. Barker, Baltimore—Clinical Methods of Cardiac Investigation.
 1910—Frank S. Meara, New York—Some Problems of Nutrition in Early Life.
 1911—Rudolph Matas, New Orleans—Inflammatory Tuberculosis.
 1912—Maurice H. Richardson, Boston—Elimination of Preventable Disasters from Surgery.
 1913—L. L. Hill, Montgomery—Surgical Complications and Sequelae of Typhoid Fever.
 1914—Frank Smithies, Chicago—Contributions of the Twentieth Century to the Better Understanding of Gastric Cancer.
 1915—John B. Elliott, Jr., New Orleans—Abscess of Liver.
 1916—Howard A. Kelly, Baltimore—Radium Therapy.
 1917—Wm. J. Mayo, Rochester—Importance of Septic Infection in the Three Great Plagues.
 1918—George E. Bushnell, Washington—The Army in Relation to the Tuberculosis Problem.
 1919—George W. Crile, Cleveland, Ohio—Abdominal Surgery in Civil and Military Hospitals.
 1920—Henry A. Christian, Boston—Bright's Disease With Special Reference to Its Treatment.
 1921—J. Whitridge Williams, Baltimore—A Critical Review of Twenty-One Years' Experience with Caesarean Section.
 1922—Chas. H. Mayo, Rochester, Minn.—The Thyroid and Its Diseases.
 1923—Jas. S. McLester, Birmingham—Nutrition in Its Newer Aspects.
 1924—James S. Stone, Boston—Abdominal Diagnoses in Children.
 1925—H. A. Royster, Raleigh—The Surgeon's Heritage and Outlook.
 1926—Stewart Roberts, Atlanta—The Heart Muscle.
 1927—G. Canby Robinson, Baltimore—The Mechanism of Heart Failure and Its Correction.
 1928—John B. Deaver, Philadelphia—Chronic Pancreatitis.
 1929—Louis B. Wilson, Rochester, Minn.—Some Suggestions for Improved Training of Medical Specialists.
 1930—Walter E. Sistrunk, Dallas, Texas—The Part That Surgical Anesthesia Has Played in Medical Science.
 1931—R. S. Cunningham, Nashville, Tenn.—Studies on the Pathology of Tuberculosis and Syphilis.
 1932—A. Benson Cannon, New York—Practical Points on the Diagnosis and Treatment of the so-called Lymphoblastoma Group of Diseases.
 1933—J. Shelton Horsley, Richmond—Cancer of the Stomach and Colon.
 1934—Russell L. Cecil, New York—Present Trends in the Study of Rheumatic Fever and Rheumatoid Arthritis.
 1935—George H. Semken, New York—A Consideration of Tumors of the Breast.
 1936—William D. Partlow, Tuscaloosa—A Debt the World Owes Medical Science.
 1937—Frank H. Lahey, Boston—Carcinoma of the Colon and Rectum.
 1938—T. M. McMillan, Philadelphia—An Optimistic View of Some of the Problems of Heart Disease.
 1939—George T. Pack, New York—Recent Advances in the Radiation Therapy of Cancer.
 1940—E. V. McCollum, Baltimore—Some Contributions of Nutritional Research to Clinical Medicine.
 1941—M. Y. Dabney, Birmingham—The Story of Breast Cancer.
 1942—Harvey B. Stone, Baltimore—Biliary Diseases as Seen by a Surgeon.
 1943—A. C. Furstenberg, Ann Arbor—Objectives in Medical Education.
 1944—Tinsley R. Harrison, Dallas, Texas—The Value and Limitations of Laboratory Tests in the Practice of Medicine.
 1945—Meeting Cancelled.
 1946—Alton Ochsner, New Orleans—The Influence of Serendipity on Medicine.
 1947—Reginald Fitz, Boston—The Early Characteristics of Certain Chronic Diseases.
 1948—Andrew C. Ivy, Chicago—The Gallbladder in Health and Disease.
 1949—Max Thorek, Chicago—Cholecystectomy: Its Technical Variations.
 1950—Paul D. White, Boston—Historical Delays in the Application of Knowledge About the Heart.

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Joseph M. Wilson (1951)..... Mobile

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 J. G. Daves (1952)..... Cullman
 A. J. Treherne (1953)..... Atmore
 J. O. Finney (1954)..... Gadsden

SECRETARY-TREASURER

Douglas L. Cannon (1955)..... Montgomery

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 French Craddock (1953)..... Sylacauga
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Alternate—D. G. Gill Montgomery

(Term: January 1, 1950–December 31, 1951)

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(Term: January 1, 1951–December 31, 1952)

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REGISTRATION AT THE EIGHTY-SECOND ANNUAL SESSION, BIRMINGHAM

APRIL 20-22, 1950

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Morgan, J. R., Birmingham
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Sumter: R. E. Hale, Bellamy; S. J. Williams, Livingston
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Tallapoosa: J. A. Chapman, Alexander City; L. H. Hamner, Camp Hill
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Winston: W. K. Wilson, Haleyville

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Anderson, M. N., Birmingham

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Anthony, J. C., Birmingham
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Austin, B. F., Decatur

B

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Barnes, R. G., Birmingham

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Carraway, B. M., Birmingham
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Chenoweth, A. I., Birmingham
Chenoweth, B. M., Jr., Birmingham
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Clark, Jean, Vincent
Clements, F. H., Birmingham
Clements, R. M., Tuscaloosa
Cohn, S. K., Birmingham
Cole, L. G., Talladega
Coleman, W. E., Birmingham
Collier, S. W., Birmingham
Collins, A. C., Scottsboro
Colquitt, C. J., Bessemer
Colvin, G. W., Lincoln
Comer, J. F., Birmingham
Conwill, G. B., Tuscaloosa
Cooley, B. S., Sr., Birmingham
Cooley, B. S., Jr., Birmingham
Corley, L. F., Jacksonville
Coston, R. M., Birmingham
Cotten, H. B., Birmingham

Cowden, A. M., Mobile
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Crawford, J. H., Columbiana
Crawford, J. M., Arab
Crenshaw, J. F., Birmingham
Crook, D. H., Troy
Crowder, J. W., Belle Ellen
Cumbie, W. G., Andalusia
Cunningham, W. A., Birmingham

D

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Davis, H. G., Jr., Birmingham
Davis, J. W., Jr., Montgomery
Dawson, L. M., Birmingham
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Denson, F. H., Bessemer
Dix, A. S., Mobile
Dixon, D. P., Talladega
Dixon, R. E., Alberta
Donald, C. J., Jr., Birmingham
Donald, J. G., Mobile
Douglas, G. F., Birmingham
Douglas, G. F., Jr., Birmingham
Drennen, Earle, Birmingham

E

Edwards, W. A., Wetumpka
Elliott, H. R., Birmingham

F

Falletta, P. T., Birmingham
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Fisher, G. E., Birmingham
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Frazer, E. B., Mobile
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Friday, W. C., Sylacauga

G

Gaines, H. F., Birmingham
Gaines, J. L., Crossville
Gaines, W. D., Atmore
Galbraith, J. G., Birmingham
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Gartrell, L. S., Ashville
Gayden, L. R., Montgomery
Gilbert, Marvin, Birmingham
Gillespy, R. R., Birmingham
Gladden, J. R., Fairfield
Glenn, E. B., Birmingham
Goldner, H., Birmingham
Goode, J. H., Tuscaloosa
Goodman, Seaburt, Birmingham
Gould, K. N., Wilsonville
Graham, G. S., Birmingham
Graham, J. B., Mobile
Gray, Hugh, Anniston
Green, A. H., Birmingham
Green, E. P., Jacksonville
Green, R. C., Birmingham

Grimes, O. R., Gadsden
Guthrie, R. F., Birmingham
Gwin, P. E., Sumiton

H

Haisten, D. C., Dothan
Hamilton, J. R., Gadsden
Hamrick, R. A., Fairfield
Hamrick, R. H., Birmingham
Hanby, E. K., Attalla
Hanby, J. E., Tuscaloosa
Hardwick, J. L., Talladega
Harris, Edward A., Birmingham
Harris, Esau A., Bessemer
Harris, F. W., Birmingham
Harris, H. A., Birmingham
Harris, R. R., Birmingham
Harris, W. M., Jr., Birmingham
Henderson, A. D., Mobile
Henderson, H. H., Birmingham
Hicks, J. J., Birmingham
Hill, H. W., Carrollton
Hillhouse, J. L., Birmingham
Hogan, E. P., Birmingham
Holding, B. F., Montgomery
Hopkins, P. I., Dothan
Howell, J. P., Selma
Hubbard, L. W., Tarrant
Hudson, H. C., Birmingham
Huey, T. F., Anniston
Hughes, B. A., Birmingham
Hughes, J. W., Decatur
Hughes, M. P., Gadsden
Humphries, J. M., Birmingham
Hunt, M. T., Boaz
Hurst, J. C., Opp
Huskey, A. L., Opelika
Hutchinson, H. H., Montgomery
Hutto, A. S., Pinson

I

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Irwin, W. H., Leeds
Isbell, E. A., Gadsden

J

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Jackson, B. F., Montgomery
Jackson, J. T., Montgomery
Jarvis, J. R., Birmingham
Jenkins, J. F., Jr., Birmingham
Johns, L. J., Birmingham
Johnson, C. A., Jr., Birmingham
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Jones, J. A., Montgomery
Jones, W. N., Birmingham
Jordan, J. S., Birmingham
Jordan, O. L., Tuscaloosa
Joseph, K. N., Birmingham

K

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Keith, G. W., Carbon Hill
Kesmodel, K. F., Birmingham
Killian, C. D., Ft. Payne

Kimbrough, R. M., Birmingham
King, W. D., Birmingham
Kinkead, K. J., Birmingham
Kirby, L. E., Birmingham
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Knight, J. H., Birmingham

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Lamberth, W. C., Alexander City
Lauter, M. A., Mobile
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Lee, A. B., Lanett
Lewis, H. J., Birmingham
Lewis, T. K., Birmingham
Linder, Hugh, Birmingham
Linn, J. E., Birmingham
Little, S. C., Birmingham
Locke, W. W., Birmingham
Long, D. J., Montgomery
Lovelady, R. G., Birmingham
Lucas, R. L., Anniston

M

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McBurney, Ralph, Birmingham
McCafferty, E. L., Mobile
McCorkle, F. W., Gadsden
McGehee, H. T., Birmingham
McKissack, W. M., Huntsville
McLallen, C. D., Jr., Birmingham
McLester, J. B., Birmingham
Mehaffey, J. W., Birmingham
Meneray, W. E., Gadsden
Messer, A. L., Birmingham
Miles, N. E., Birmingham
Miller, J. A., Wylam
Miller, S. T., Yantley
Miller, W. L., Gadsden
Mintz, H. H., Mobile
Moffett, A. S., Bessemer
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len
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Morgan, P. A., Jr., Birmingham
Morris, H. B., Birmingham
Motley, J. P., Birmingham
Motley, S. D., Birmingham

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Norton, T. B., York

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O'Dell, J. W., Birmingham

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Oliver, J. T., Tuscaloosa
Owen, H. R., Gadsden
Owens, A. H., Birmingham

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SUMMARY OF ANNUAL ATTENDANCE

Year	Life Counsellors	Active Counsellors	Delegates	Members	Visitors	Total	Place
1919	22	43	87	94	102	348	Mobile
1920	16	61	59	85	51	272	Anniston
1921	26	65	73	183	58	405	Montgomery
1922	26	72	76	314	68	556	Birmingham
1923	14	48	66	106	50	284	Mobile
1924	29	70	84	230	79	492	Montgomery
1925	27	78	97	328	113	643	Birmingham
1926	33	74	105	194	131	537	Mobile
1927	36	85	104	252	87	564	Montgomery
1928	33	77	108	507	106	831	Birmingham
1929	19	60	102	176	109	466	Mobile
1930	32	83	106	286	102	609	Montgomery
1931	26	80	116	410	158	790	Birmingham
1932	19	60	101	158	133	471	Mobile
1933	21	74	103	264	85	547	Montgomery
1934	26	75	97	404	53	655	Birmingham

Year	Life Counsellors	Active Counsellors	Delegates	Members	Visitors	Total	Place
1935	15	59	91	180	83	428	Mobile
1936	23	79	95	265	68	530	Montgomery
1937	25	80	96	396	81	678	Birmingham
1938	18	65	78	157	63	381	Mobile
1939	29	79	96	326	84	614	Montgomery
1940	29	77	105	401	229	841	Birmingham
1941	29	66	86	211	91	483	Mobile
1942	33	75	105	249	82	544	Montgomery
1943	31	71	83	321	127	633	Birmingham
1944	33	72	92	214	110	521	Montgomery
1945	Meeting Cancelled						
1946	38	81	87	330	127	663	Birmingham
1947	34	76	91	333	124	658	Birmingham
1948	24	64	87	239	127	541	Mobile
1949	31	84	93	288	106	602	Montgomery
1950	26	85	91	391	118	711	Birmingham

AMERICAN MEDICAL ASSOCIATION NEWS

REPORT INCREASE OF 2,266 IN PHYSICIAN
POPULATION FOR 1949

The net increase in the number of physicians in the United States and its territories and possessions in 1949 was 2,266, according to the 48th Annual Medical Licensure Report of the American Medical Association's Council on Medical Education and Hospitals.

The report, presented by Dr. Donald G. Anderson, secretary of the council, and his assistant, Mrs. Anne Tipner, both of Chicago, appears in the June 3 Journal of the American Medical Association.

These official figures indicate that last year 5,866 physicians were licensed for the first time, and thus represent the gross additions to the profession for that year. In 1949 there were 3,600 deaths of physicians reported to the offices of the American Medical Association.

The greatest number of physicians licensed for the first time in any one state was 973 in New York. California had more than 500 first licentiates and Pennsylvania more than 400.

During the year there were 12,181 licenses to practice medicine issued by the medical examining boards of the 48 states, the Dis-

trict of Columbia and the territories and possessions.

California led in the number of physicians licensed with 1,511. New York state was second with 1,452, Rhode Island third with 644 and Illinois fourth with 590. Ohio licensed 568, Texas 437, Michigan 411, Massachusetts 389, and New Jersey 346. Florida followed with 325, Missouri licensed 316, Minnesota 312 and Maryland 301.

During 1949 there were 5,963 applicants for medical licensure by written examination, of whom 5,219 passed. The candidates examined represented 70 approved medical schools in the United States, nine approved medical schools of Canada, six United States medical schools now extinct, 124 faculties of medicine and two licensing corporations of other countries, six unapproved medical schools in the United States and 10 schools of osteopathy.

Among the 4,675 graduates of approved medical schools in the United States, only 3.2 per cent failed. Of the 737 graduates of faculties of medicine located in countries other than the United States and Canada, 56.7 per cent failed and of the 114 graduates of schools of osteopathy, 42.1 per cent failed.

Among the 282 graduates of unapproved medical schools in the United States, 34.7 per cent failed.

Fourteen state medical licensing boards have accepted a list of high standard foreign medical schools compiled by the American Medical Association's Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges, according to the report. These state boards will use the list as a guide to licensing foreign-trained physicians. Fifteen states report that their boards have not met since the list was released but that the list will be given consideration.

The list contains the names of 38 schools in nine foreign countries. It was issued at the 46th Annual Congress on Medical Education and Licensure held in Chicago in February of this year. The list is not final and it will be supplemented as information is compiled for other schools, the report says.

LINK LUNG CANCER TO PROLONGED TOBACCO SMOKING

A significant relationship between prolonged tobacco smoking and development of cancer of the lung is shown by two reports published in the May 27 Journal of the American Medical Association.

Excessive and prolonged use of tobacco, especially cigarettes, seems to be an important factor in causing cancer which originates in the lungs, Ernest L. Wynder, B. A., and Dr. Evarts A. Graham of Washington University School of Medicine and Barnes Hospital, St. Louis, conclude.

Among 605 men with lung cancer, 96.5 per cent were moderately heavy to chain smokers for many years, compared with 73.7 per cent among the 780 men in the general hospital population without cancer, the St. Louis doctors point out. Among the cancer group, 51.2 per cent were excessive or chain smokers compared to 19.1 per cent in the general hospital group.

"In general, it appears that the less a person smokes the less are the chances of cancer of the lung developing and the more heavily a person smokes the greater are his chances of becoming affected with this disease," they say.

Smokers were classified on the basis of number of cigarettes smoked per day for 20 years or more. Pipe and cigar smokers were included by counting one cigar as five cigarettes and one pipeful as two and a half cigarettes. Light smokers were classified as smoking one to nine cigarettes, moderately heavy smokers 10 to 15, heavy smokers from 16 to 20, excessive smokers 21 to 34 and chain smokers 35 or more.

There may be a lag period of 10 years or more between the cessation of smoking tobacco and the occurrence of clinical symptoms of cancer, however, the St. Louis doctors found. Among the patients with cancer who had a history of smoking, 96.1 per cent had smoked for over 20 years.

The occurrence of carcinoma of the lung in a male nonsmoker or minimal smoker is a rare phenomenon (2.0 per cent), according to the study.

Tobacco seems to play a similar but somewhat less evident role in causing cancer in women, the doctors found. The incidence of lung cancer is less in women than in men today. This is believed to be due in part to the fact that few women have smoked for over 20 years.

There is rather general agreement that the incidence of bronchiogenic carcinoma has increased greatly in the last half century, the doctors point out. The enormous increase in the sale of cigarettes in this country approximately parallels this increase of bronchiogenic carcinoma.

Among male patients with cancer of the lungs, 94.1 per cent were found to be cigarette smokers, 4.0 per cent pipe smokers and 3.5 per cent cigar smokers. This prevalence of cigarette smoking is greater than among the general hospital population of the same age group. The greater practice of inhalation among cigarette smokers is believed to explain the increased incidence of the disease.

Data obtained from 1,650 patients admitted routinely to the Roswell Park Memorial Institute, Buffalo, N. Y., indicate that in a hospital population cancer of the lung occurs more than twice as frequently among those who have smoked cigarettes for 25 years than among other smokers or nonsmokers of comparable age, according to another study pub-

lished in the same issue of the Journal of the AMA.

"Pipe smokers apparently experience an almost equal increase in the incidence of lip cancer, compared with other smokers or non-smokers," say Drs. Morton L. Levin, Hyman Goldstein and Paul R. Gerhardt of the Bureau of Cancer Control, New York State Department of Health, Albany.

"The data suggest, although they do not establish, a casual relation between cigaret and pipe smoking and cancer of the lung and lip. Cancer is now generally considered a disease attributable to multiple causative factors. Among these are 'irritants.'

"An irritant which is noncarcinogenic alone may nevertheless increase the percentage of tumors produced when its action is combined with that of a carcinogen. Thus, some experimental basis exists for explaining the apparent effect of cigaret and pipe smoking, although the true nature of the association with lung and lip cancer remains to be determined."

HORMONE-RELATED DRUG FAILS IN TEST AGAINST RHEUMATOID ARTHRITIS

Pregnenolone, which showed some promise in early tests against rheumatoid arthritis, failed to produce good results against the disease in 18 patients, according to a report by New York doctors which appears in the May 27 Journal of the American Medical Association.

The study was made by Drs. C. Maynard Guest, William H. Kammerer, Russell L. Cecil and Solomon A. Berson of the Veterans Administration Hospital, Bronx, and the New York Hospital and Cornell University Medical College.

"Intramuscular injections of pregnenolone or pregnenolone acetate daily or two or three times a week resulted in no improvement in 17 cases of rheumatoid arthritis," the doctors say.

"One patient with rheumatoid arthritis of the spine improved objectively and subjectively. In one patient with rheumatoid arthritis of the spine there was minor improvement at the end of one week's treat-

ment, but this was followed by gradual relapse in the face of continued therapy.

"It may be that larger amounts given over a longer period of time would have a more beneficial effect. The negative results have led us to believe that these agents offer no real promise in the treatment of rheumatoid arthritis."

The doctors found also that treatment with adrenalin and testosterone propionate (the male hormone) failed to result in any consistent improvement in patients with rheumatoid arthritis.

CALIFORNIA REPORT INDICATES Q FEVER IS TRANSMISSIBLE BY PERSONAL CONTACT

A report from Los Angeles indicates that Q fever may be transmitted from person to person.

Three persons apparently have contracted the disease by attending a patient, Dr. David L. Deutsch and E. Taylor Peterson, a laboratory worker, of Wadsworth Hospital, Veterans Administration Center, say in the May 27 Journal of the American Medical Association.

The mode of transmission of the disease was not determined.

More than 50,000 persons in the Los Angeles area probably have been infected during recent years with the microbe that causes Q fever, doctors and an epidemiologist of the National Institutes of Health, the U. S. Public Health Service and the California State Department of Public Health announced recently.

The disease was found to have occurred in the metropolitan area of Los Angeles in 1947. It commonly is characterized by headache, high fever, severe sweats and pneumonia-like changes in the lungs. Nine deaths from Q fever have been reported.

A study of Q fever made in the southern California area where infection with the microbe is widespread among cattle suggests that humans may contract the infection by occupation in dairy or livestock industries, use of raw milk and residence within one fourth a mile of places where cattle are maintained or beef is processed.

PSYCHOLOGIST GIVES REQUIREMENTS IN SCHOOL LIGHTING

Certain basic requirements in school lighting are advised by Miles A. Tinker, Ph. D., professor of psychology at the University of Minnesota, Minneapolis, in a report to the Council on Physical Medicine and Rehabilitation of the American Medical Association.

Dr. Tinker's report appears in the May 27 Journal of the American Medical Association.

"In prescribing illumination for any school, one should coordinate the intensity and distribution of light with the decoration," he says.

"Several illuminants, varying in character, are available. Variation usually is accompanied with some changes in color of the

light. The more common artificial illuminants are tungsten filament incandescent light, mercury arc light and fluorescent light.

"In ordinary seeing situations such as found in schools, efficiency of seeing is just as good under one as under any other of the illuminants. Researchers of Harvard University claim that the quality of light derived from fluorescent lamps, no matter what combination of colors is used, is both unpleasant and distracting to workers in reading rooms.

"A recently devised fluorescent tube (soft white) appears to yield less disagreeable light. Under the light of many of the fluorescent tubes, colors in decoration tend to go 'flat' and the colors of objects frequently are altered in appearance."

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Miscellany

URGES COMMUNITY ACTION ON PROBLEMS OF ALCOHOLISM

The community that faces the problems of alcoholism squarely is making a sound investment in the health and happiness of all its citizens, Dr. Leslie A. Osborn, head of the Department of Psychiatry of the University of Buffalo School of Medicine, Buffalo, N. Y., said today.

An estimated 3,000,000 persons in the United States are excessive drinkers and nearly one fourth of this number are said to be chronically alcoholic.

In an article in a current Journal of the American Medical Association, Dr. Osborn cited the establishment of centers for treatment and study of alcoholism, such as that in Rochester, N. Y., and the University of Buffalo Information and Rehabilitation Center, as a move in the direction of community responsibility.

"A community center serves as a coordinating and educational headquarters for an organized approach to the medical, psychi-

atric, social and public health aspects of the patients' illness," Dr. Osborn pointed out.

"The acceptance as a person and the possibility of finding real help are important early experiences for the patient coming to the center," Dr. Osborn said.

"Often he is in poor physical condition and requires organic examination; facilities need to be available for this and for temporary hospital care.

"The psychiatric study calls for the psychiatrist, particularly one with experience in problems at the community level. The psychiatrist is not nearly as effective alone as he is as part of a full psychiatric team—psychiatrist, internist, social worker, psychologist, receptionist and, for in-patient work, the psychiatric nurse.

"Added to these are other workers in various cases—clergymen, judges, social agencies and the like—whose combined efforts can bring about results that no one person can achieve. In the community there are already many who have played an active role in combating alcoholism, and particular credit here should be given to the pioneering efforts of Alcoholics Anonymous.



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